

AUTHOR: JAIPRAKASH PANDEY



72 PRACTICE DRAWINGS

Fully dimensioned 2D and 3D
drawings for practice

BY SOURCECAD LEARNING

Second Edition

INTRODUCTION

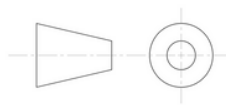
Practice is the key to learning any skill.

Any student learning new CAD software like AutoCAD, Fusion 360, Solidworks or more needs hands-on exercises to practice the skills and that's where this book fills the gap.

This second edition of the book contains revised drawings with corrected dimensions and several new 2D and 3D drawings.

All the drawings now contain proper construction geometries, accurate dimensions up to the required number of decimal places and placeholders wherever necessary.

3D drawings in this book are made in the **third angle of projection** and the symbol of the third angle as shown here is added to every 3D drawing to avoid confusion.



If you are an instructor feel free to use this book in your classroom. I would highly appreciate it if you acknowledge SourceCAD as the Source of this book and all its drawings.



VIDEO DESCRIPTION OF DRAWINGS

Step by step method of making every single drawing from this book is explained in the practice drawing courses from SourceCAD.

If you are stuck with any drawing and want to learn the steps of making it then head over to SourceCAD and check its video in the practice drawing course.

To check the video simply click the button under every drawing and it will take you to the respective course.

All the videos are made with AutoCAD, Fusion 360, Solidworks and BricsCAD software but you can follow the same steps using any CAD software.

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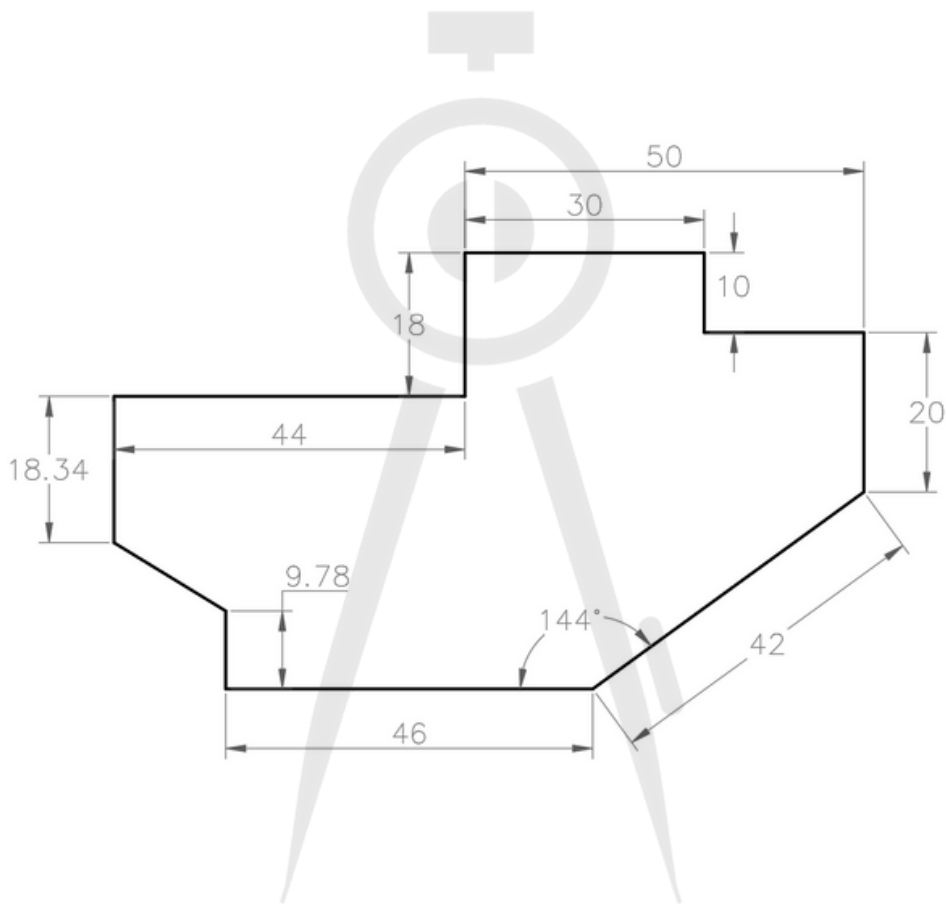


01

2D PRACTICE DRAWINGS



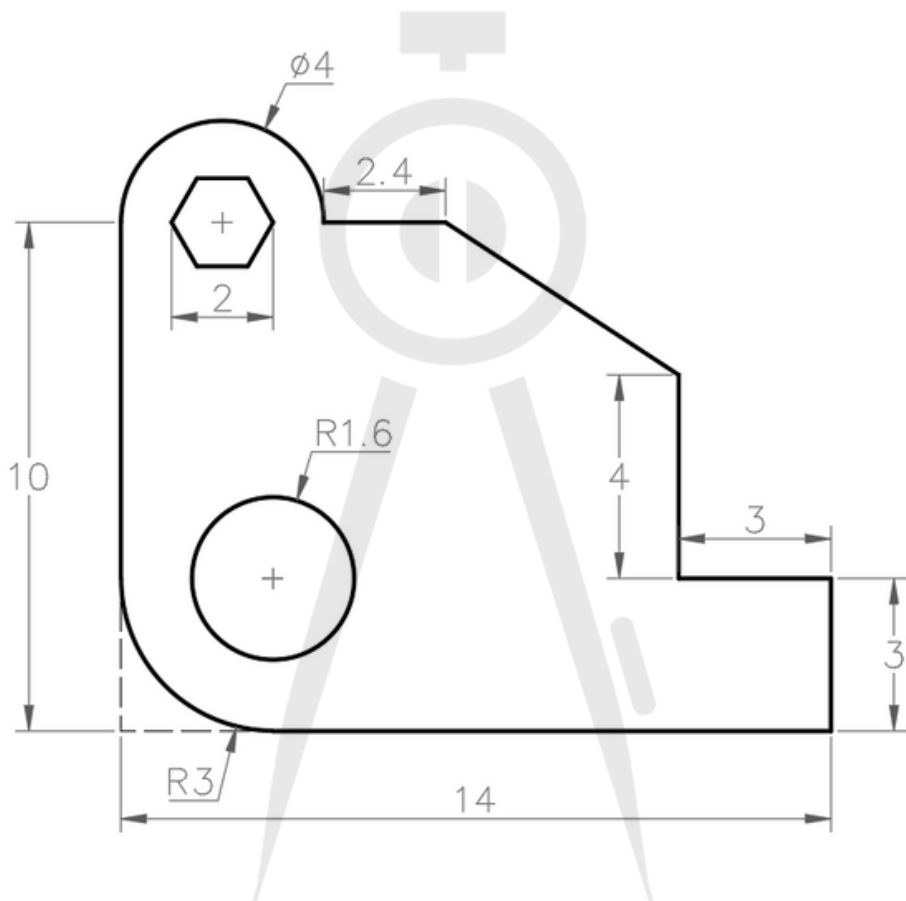
2D Drawings



2D Drawing -1

Learn to make this drawing

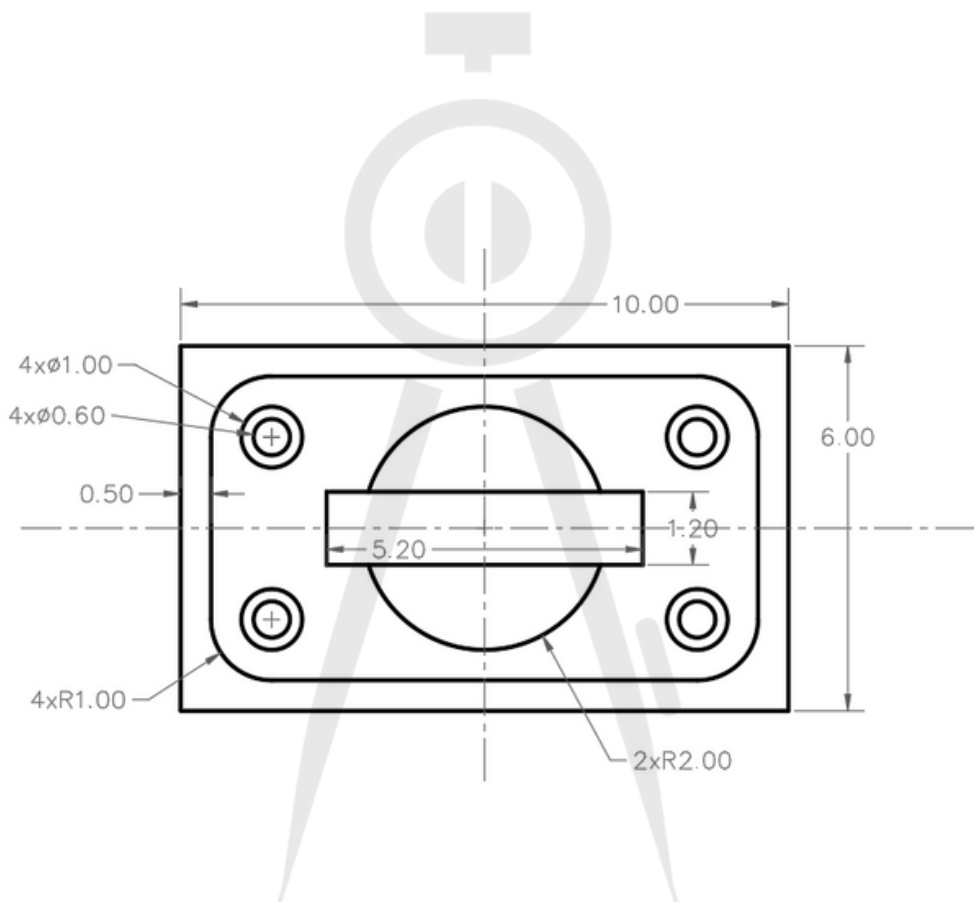
2D Drawings



2D Drawing -2

Learn to make this drawing

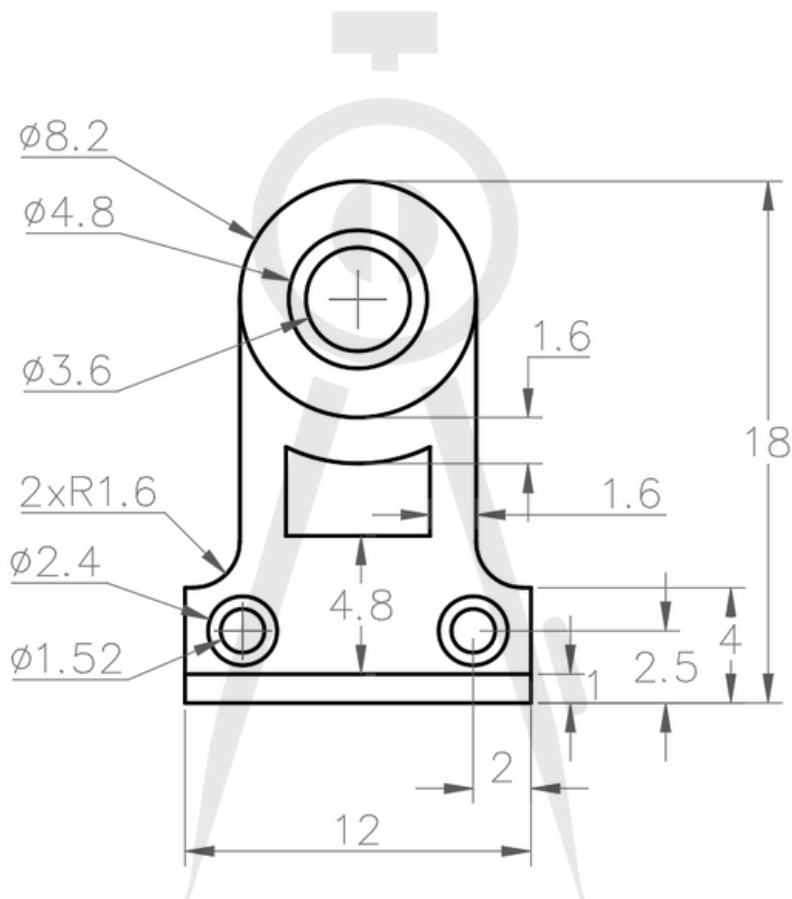
2D Drawings



2D Drawing -3

Learn to make this drawing

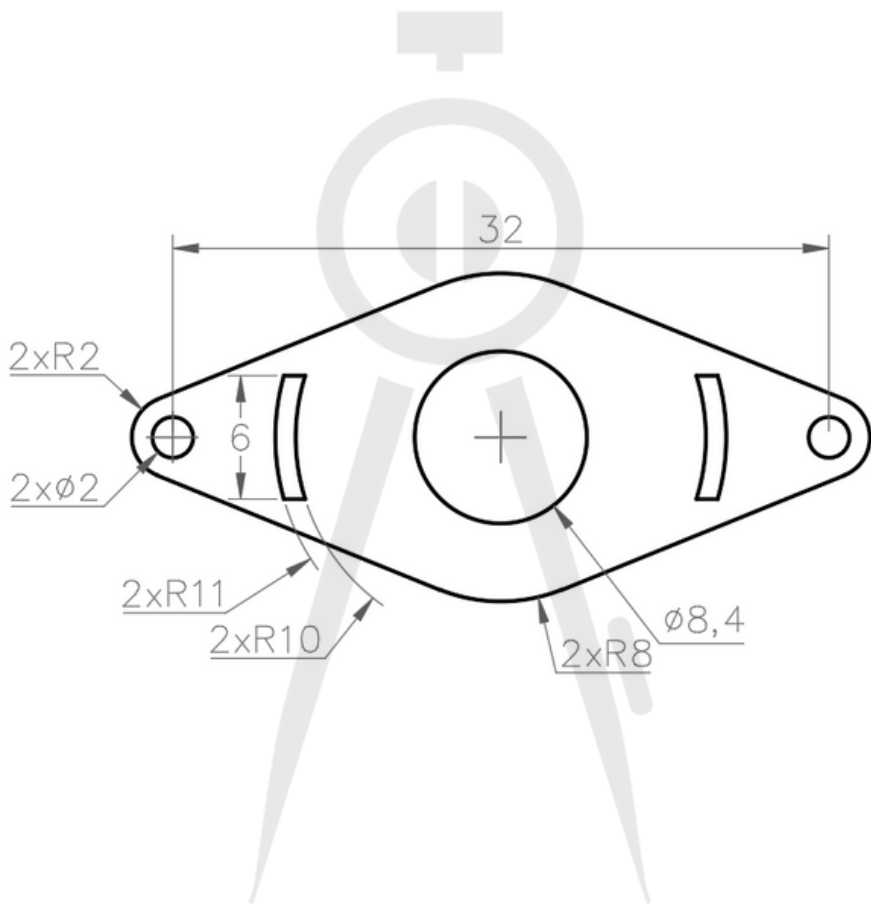
2D Drawings



2D Drawing -4

Learn to make this drawing

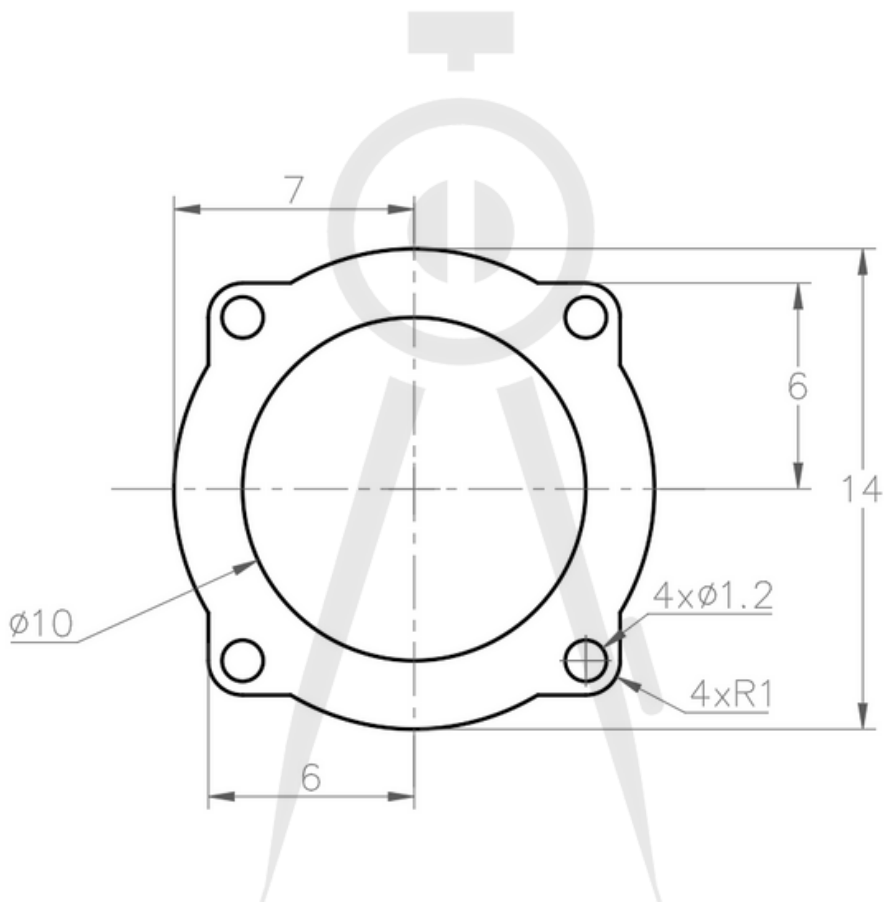
2D Drawings



2D Drawing -5

Learn to make this drawing

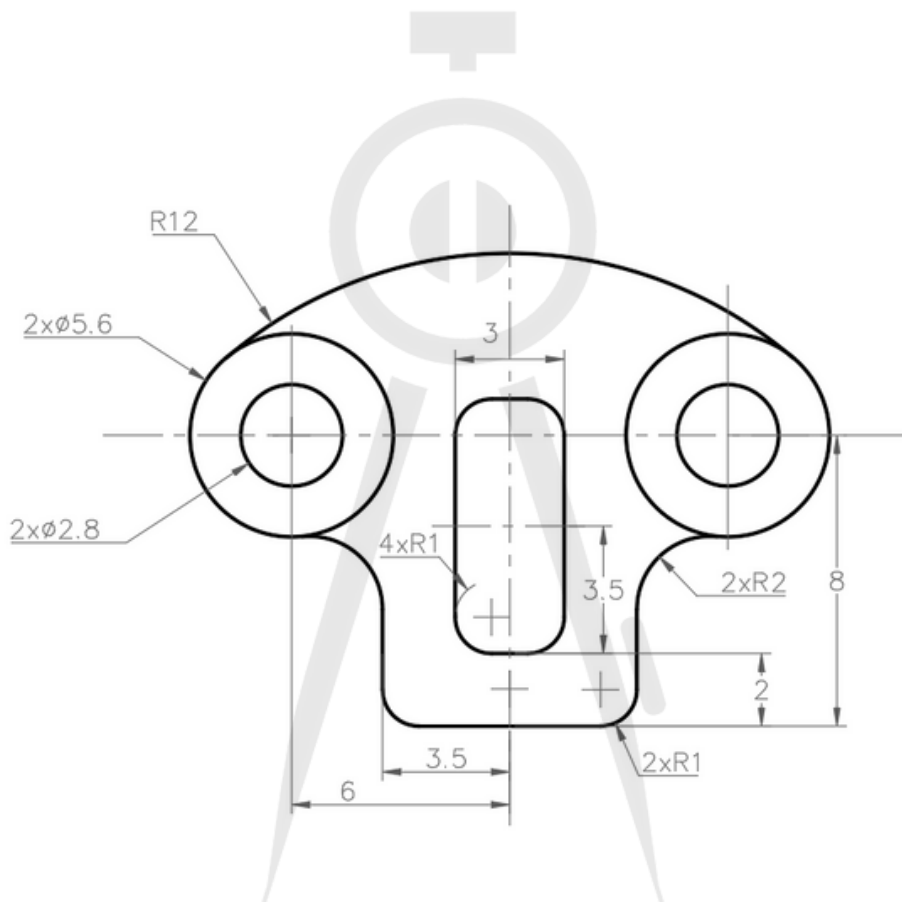
2D Drawings



2D Drawing -6

Learn to make this drawing

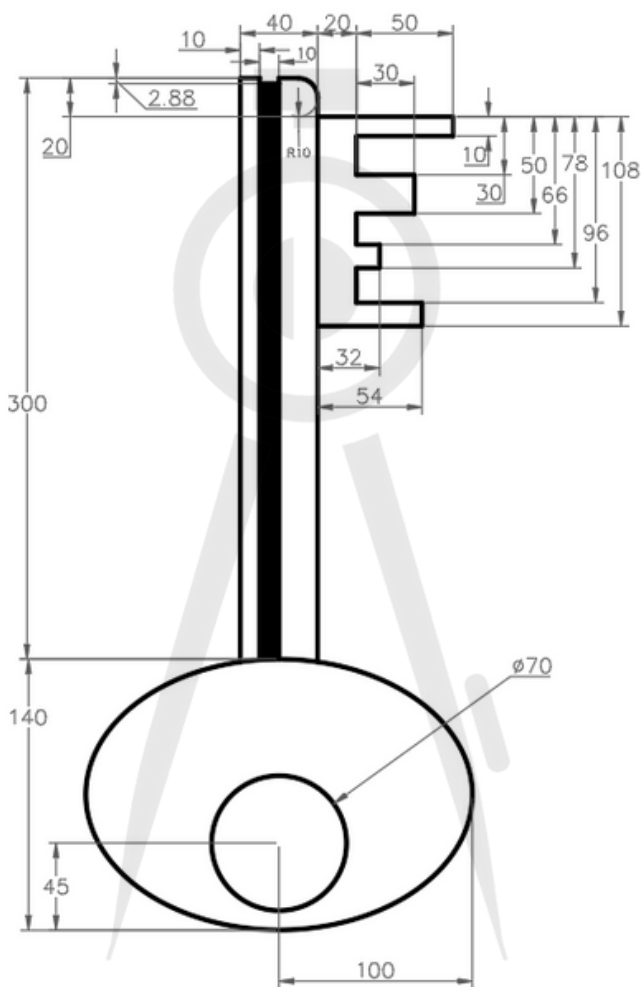
2D Drawings



2D Drawing -7

Learn to make this drawing

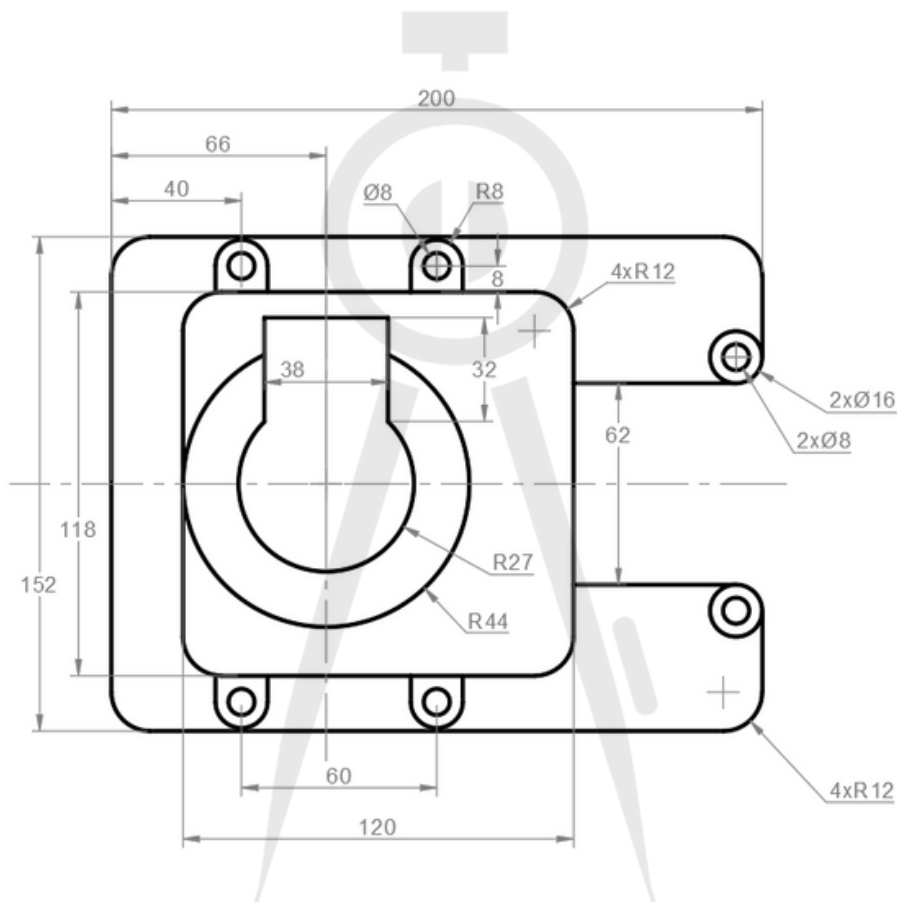
2D Drawings



2D Drawing -8

Learn to make this drawing

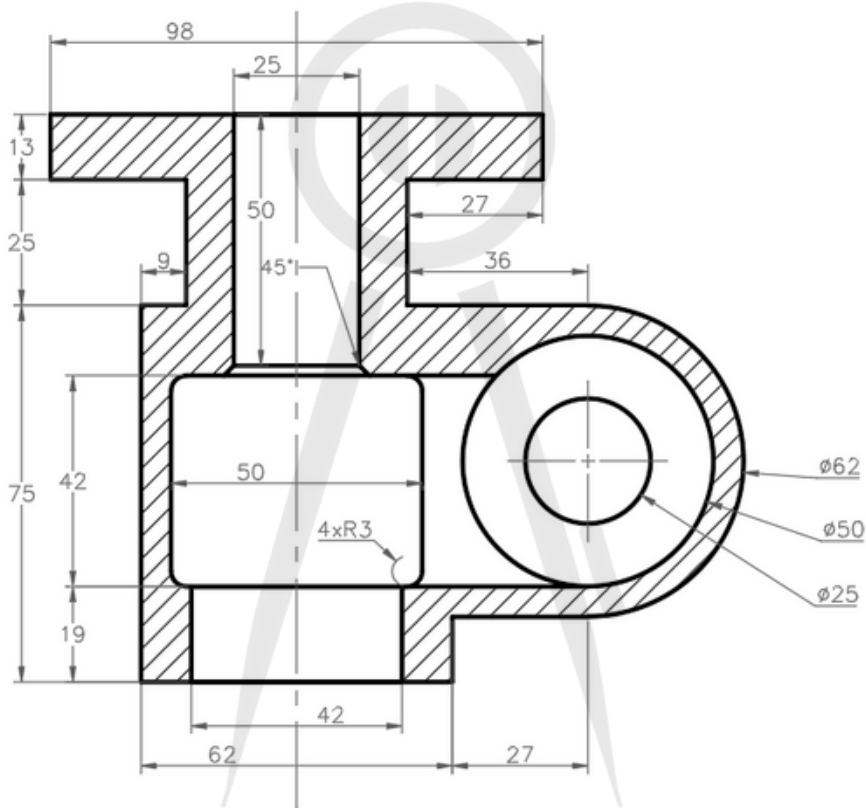
2D Drawings



2D Drawing -9

Learn to make this drawing

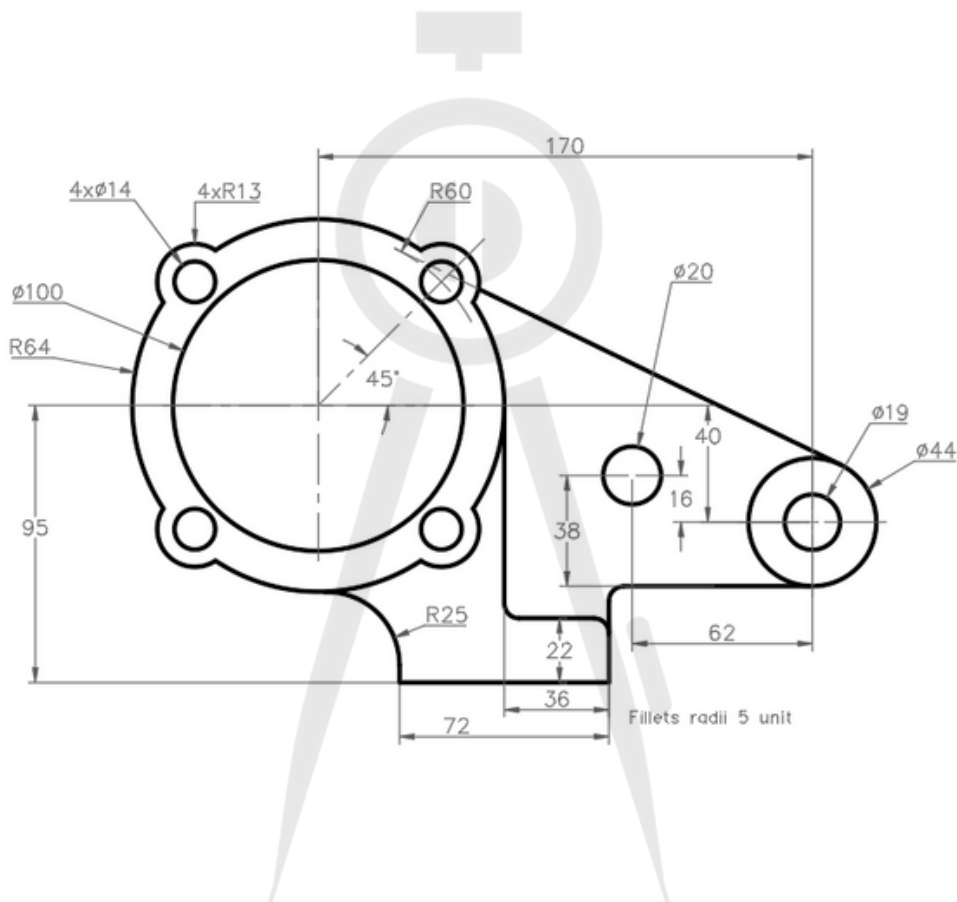
2D Drawings



2D Drawing -10

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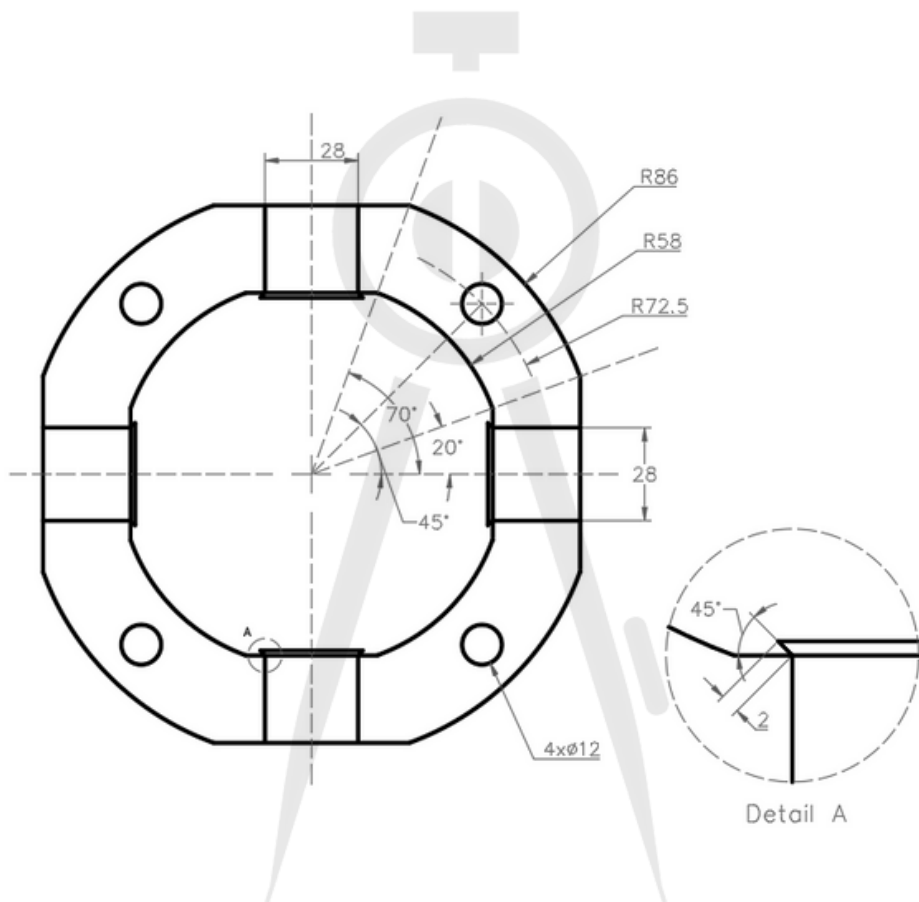
2D Drawings



2D Drawing -11

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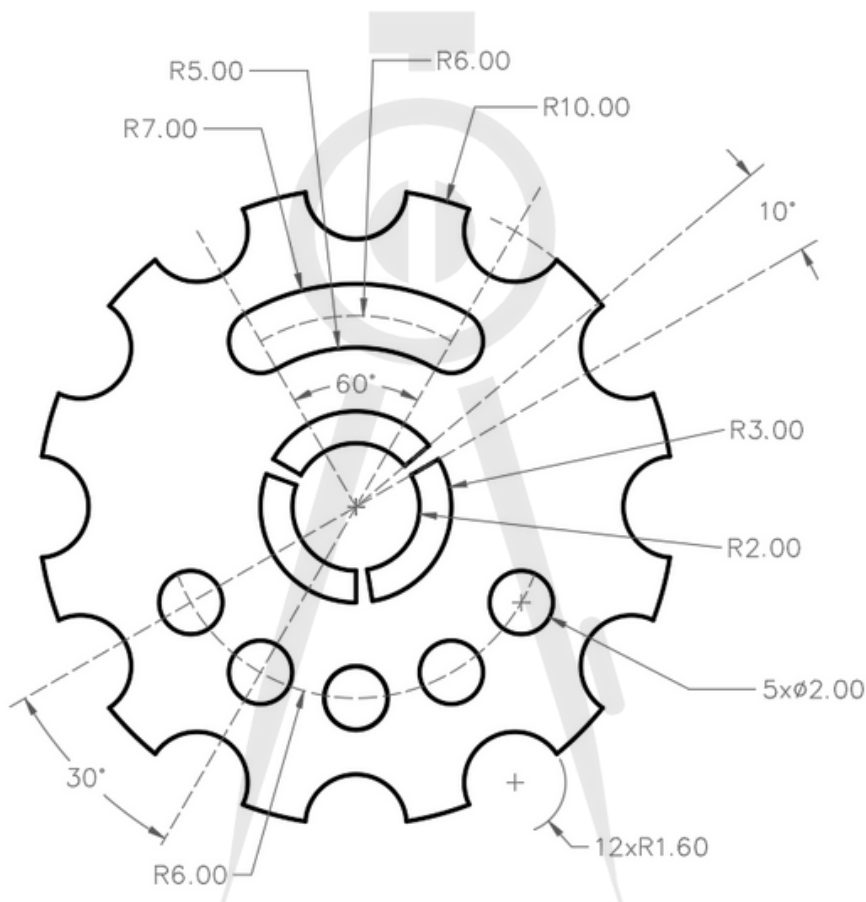
2D Drawings



2D Drawing -12

Learn to make this drawing

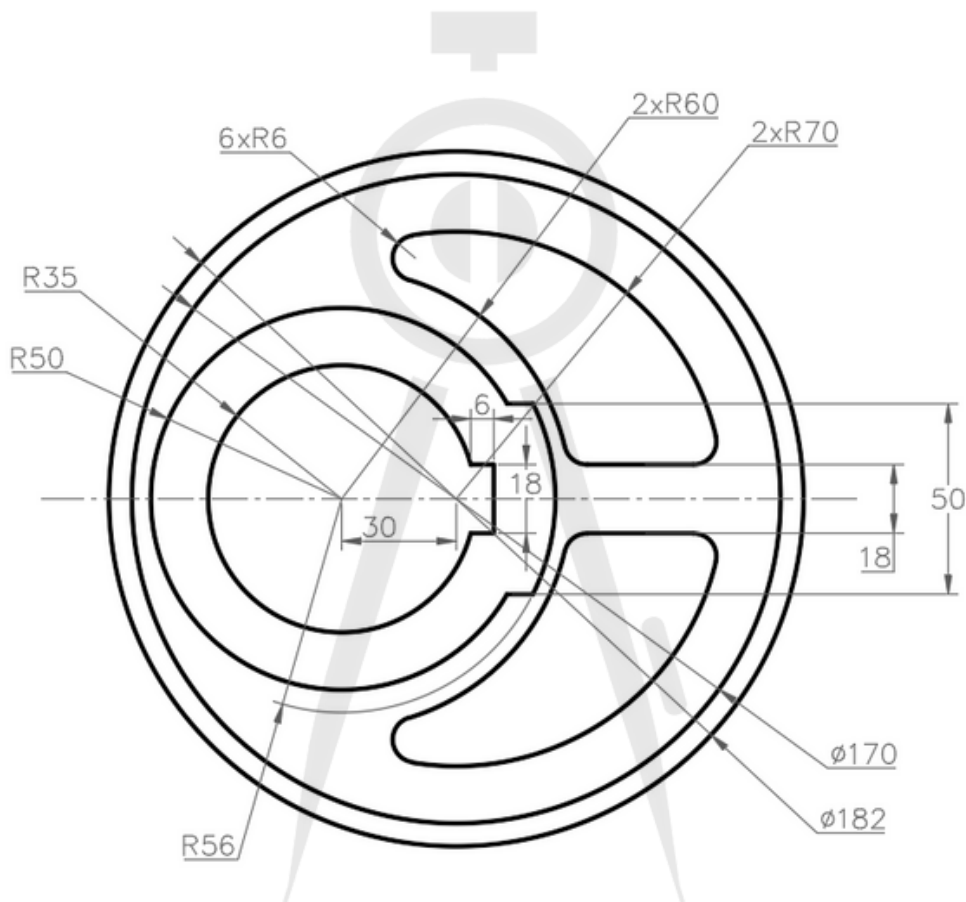
2D Drawings



2D Drawing -13

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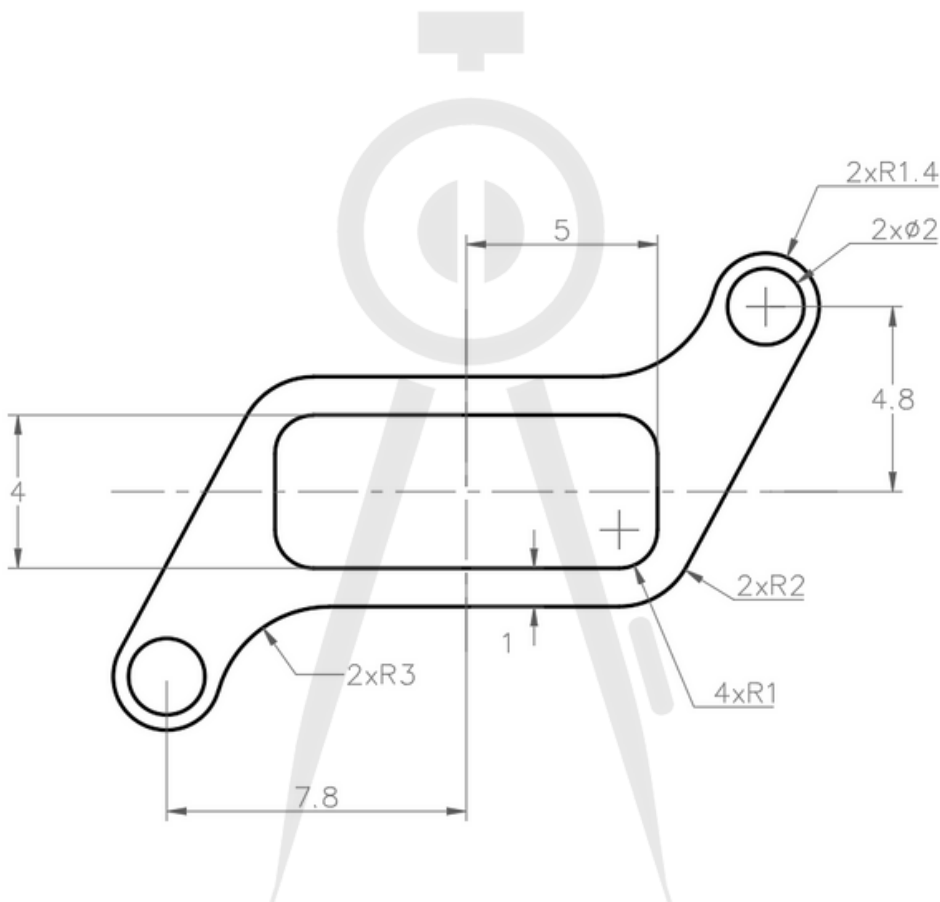
2D Drawings



2D Drawing -14

Learn to make this drawing

2D Drawings

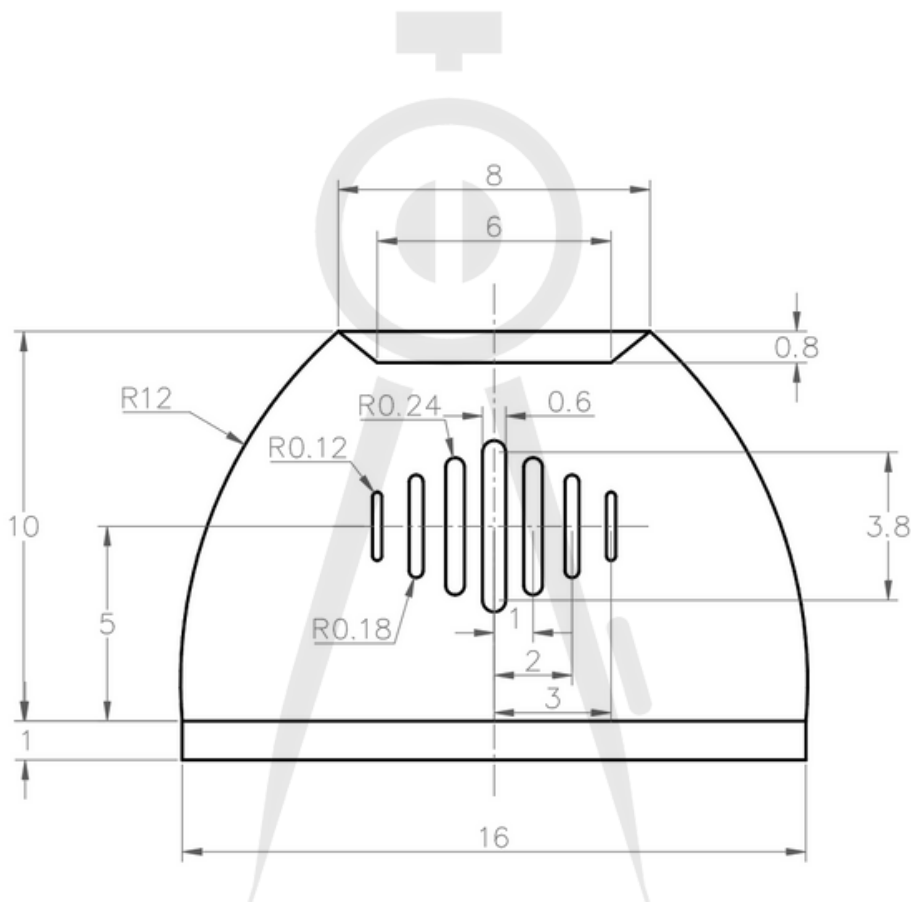


2D Drawing -15

Learn to make this drawing

Learn to make this drawing

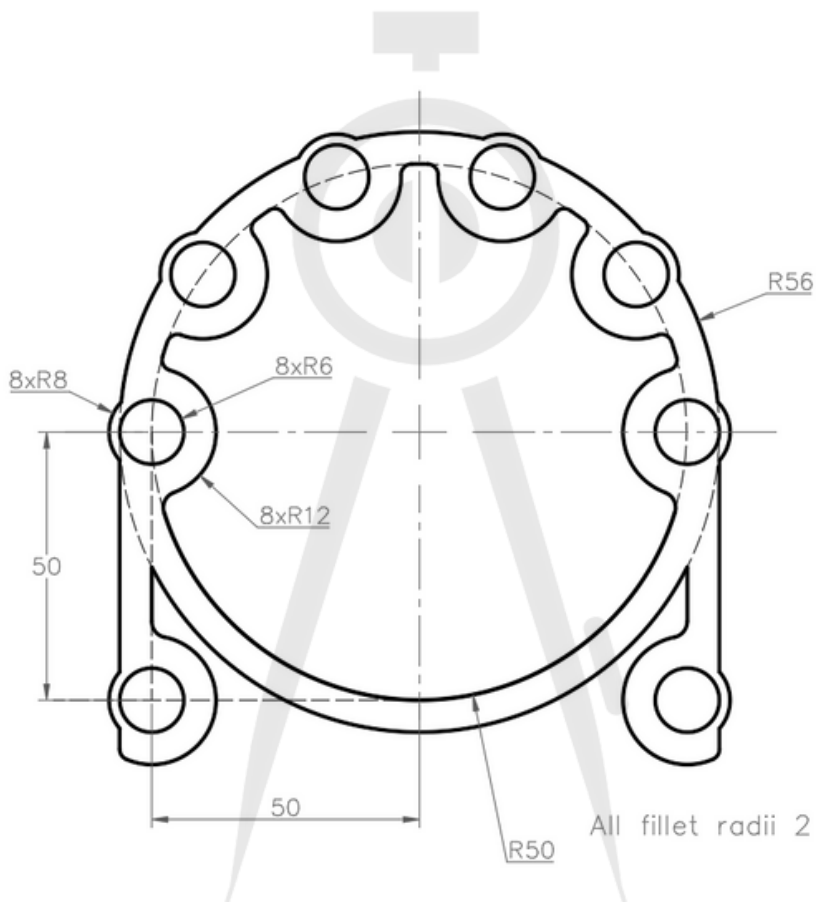
2D Drawings



2D Drawing -17

Learn to make this drawing

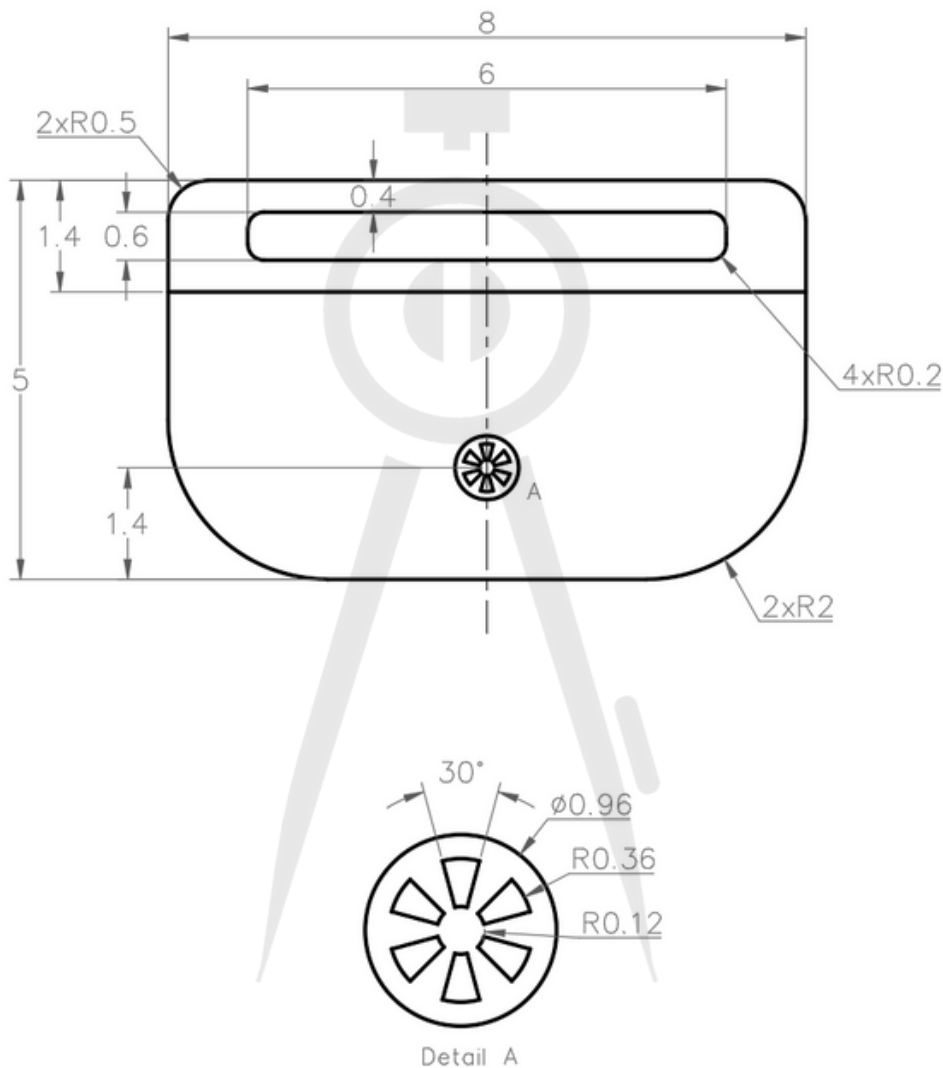
2D Drawings



2D Drawing -18

Learn to make this drawing

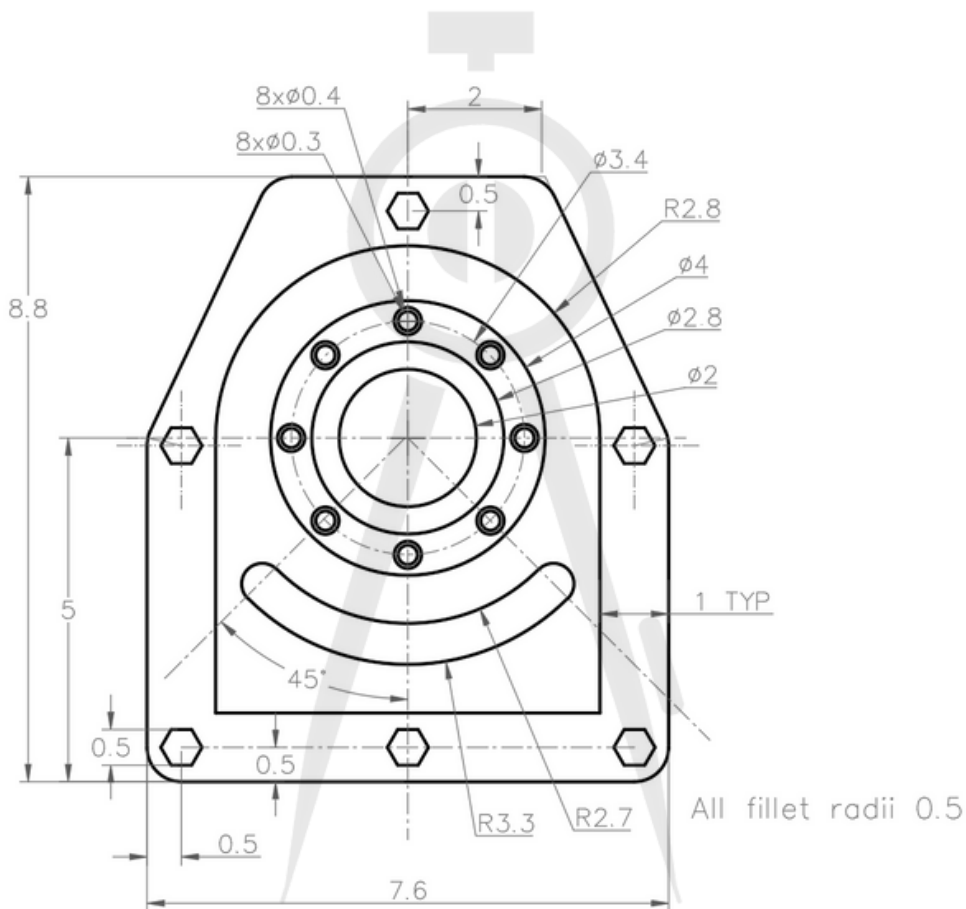
2D Drawings



2D Drawing -19

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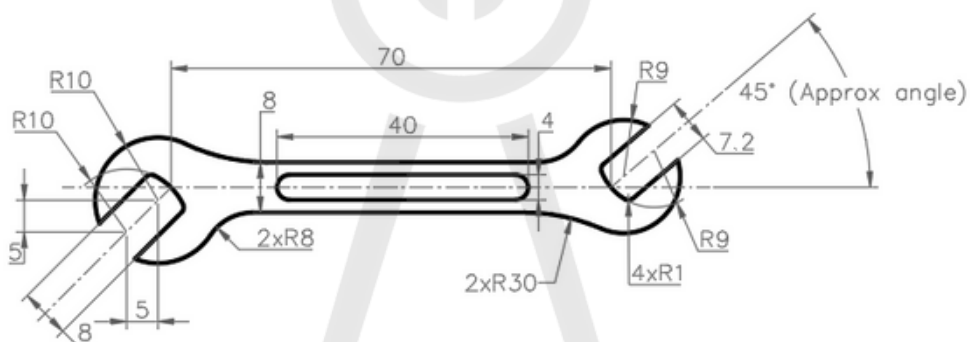
2D Drawings



2D Drawing -20

Learn to make this drawing

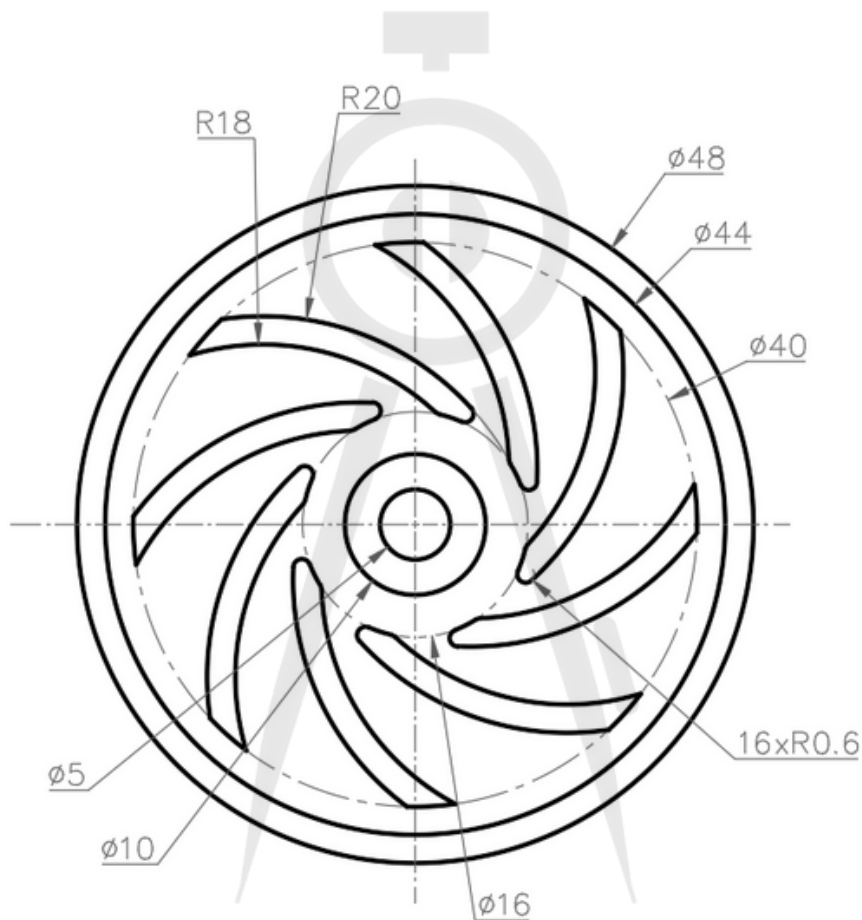
2D Drawings



2D Drawing -21

Learn to make this drawing

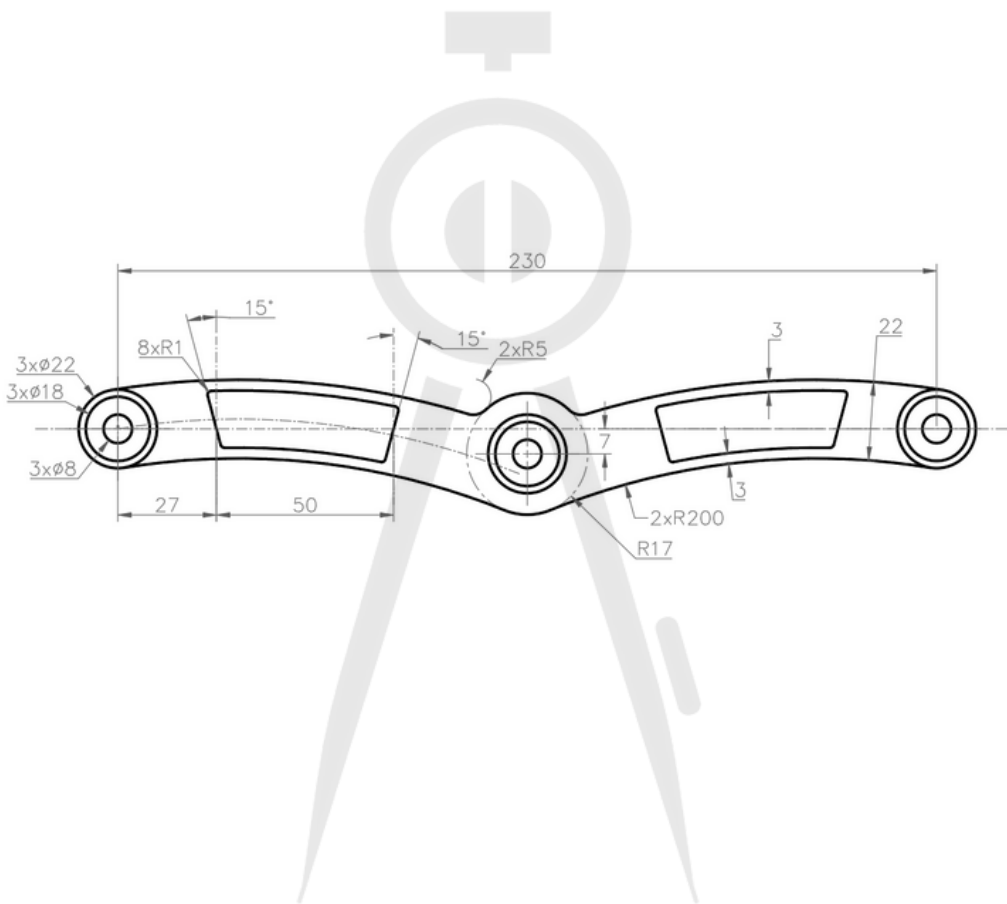
2D Drawings



2D Drawing -22

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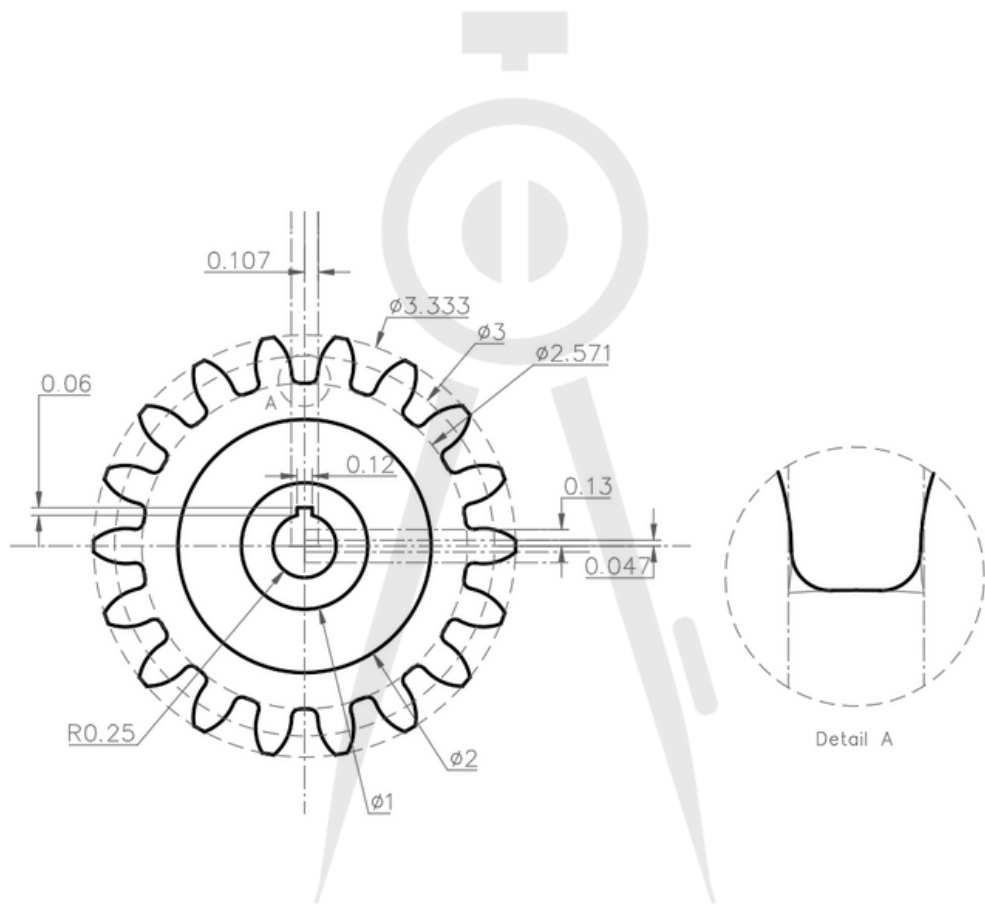
2D Drawings



2D Drawing -23

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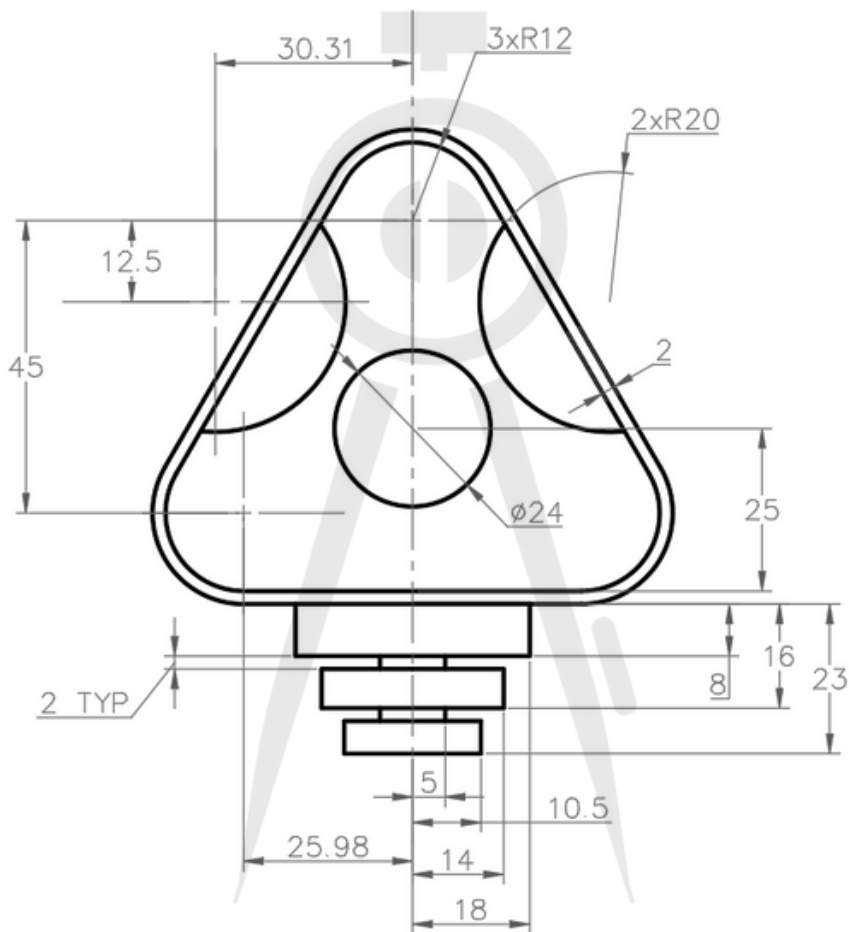
2D Drawings



2D Drawing -24

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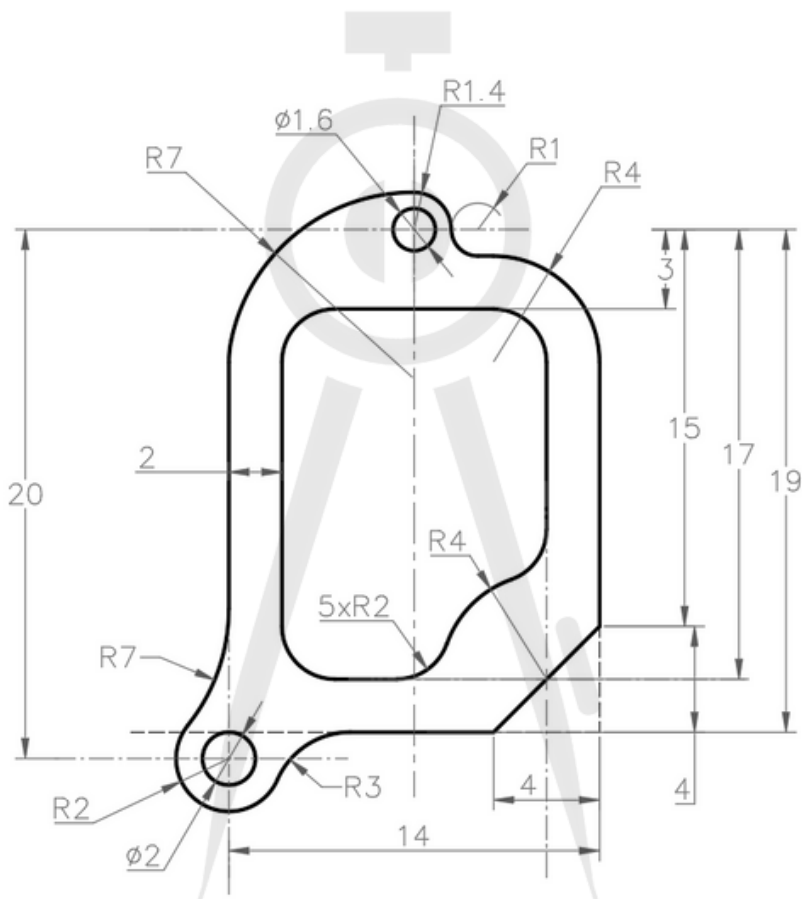
2D Drawings



2D Drawing -25

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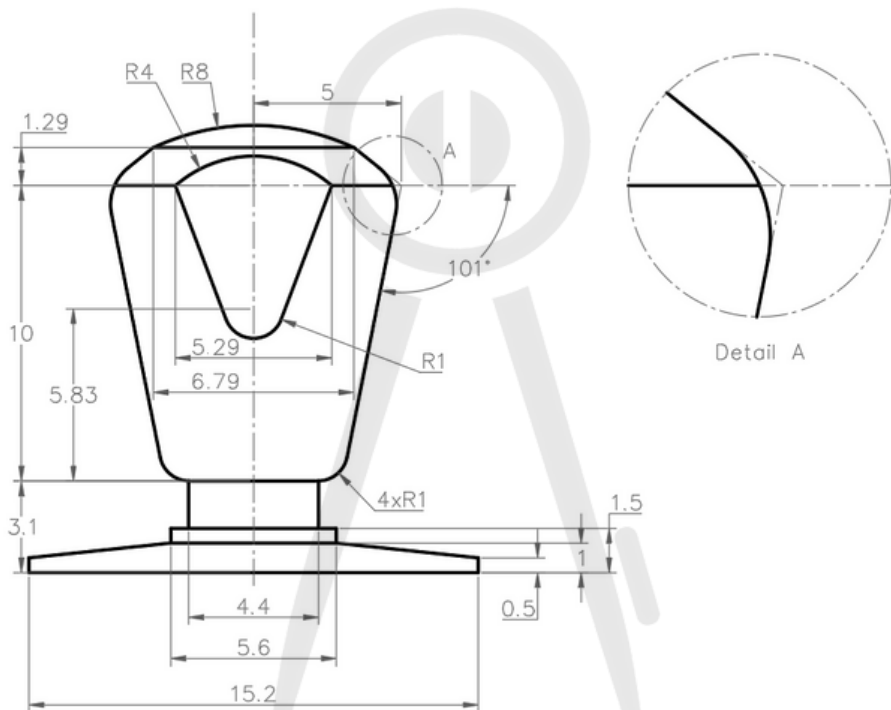
2D Drawings



2D Drawing -26

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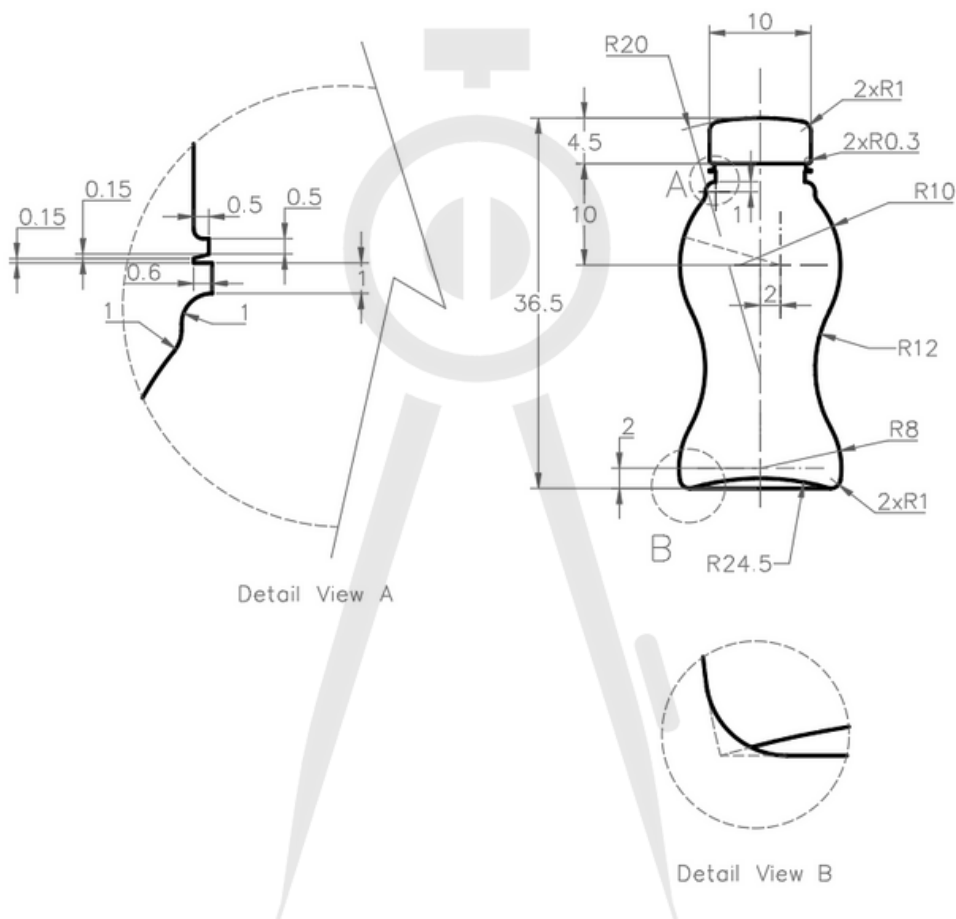
2D Drawings



2D Drawing -27

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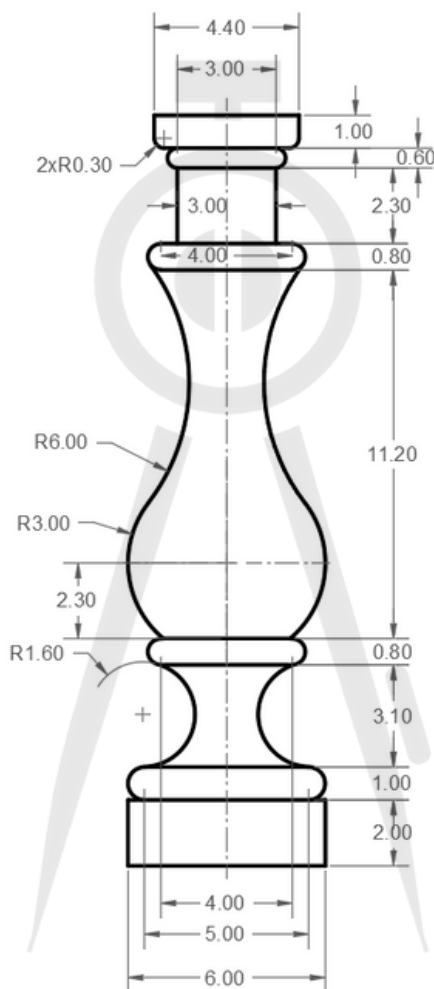
2D Drawings



2D Drawing -28

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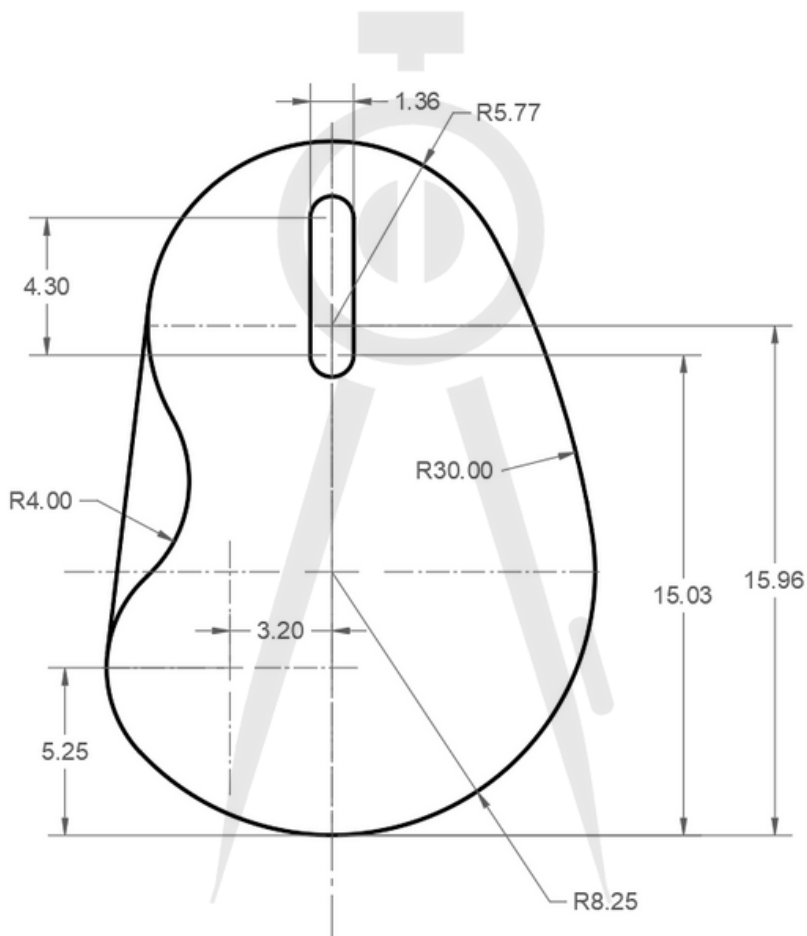
2D Drawings



2D Drawing -29

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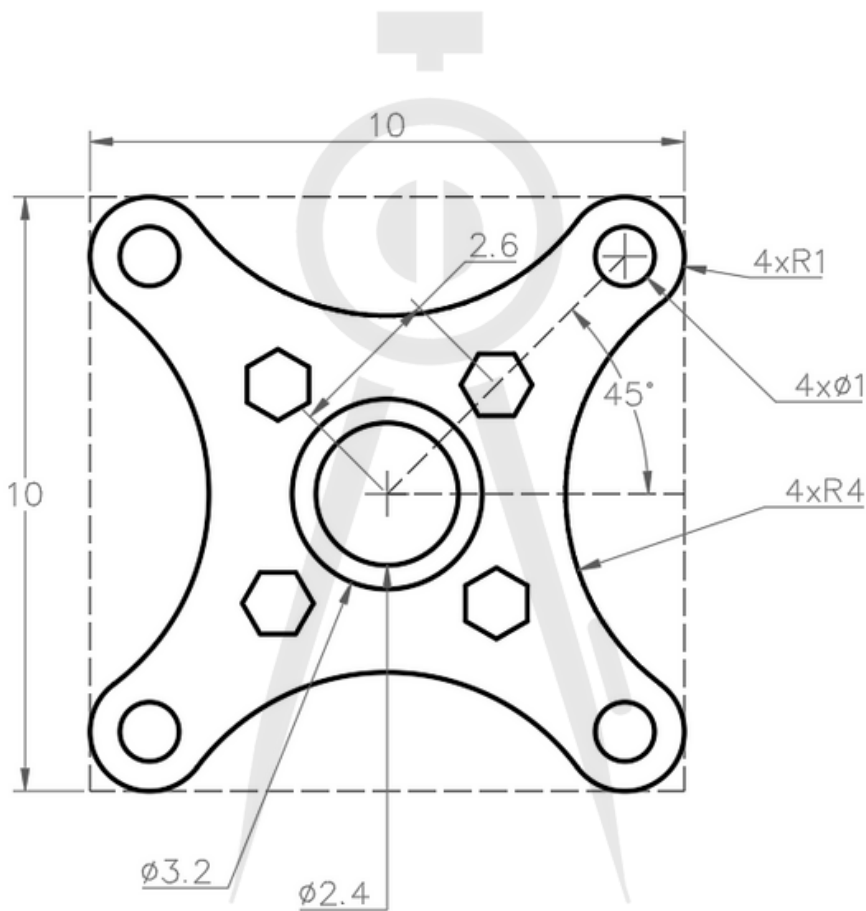
2D Drawings



2D Drawing -30

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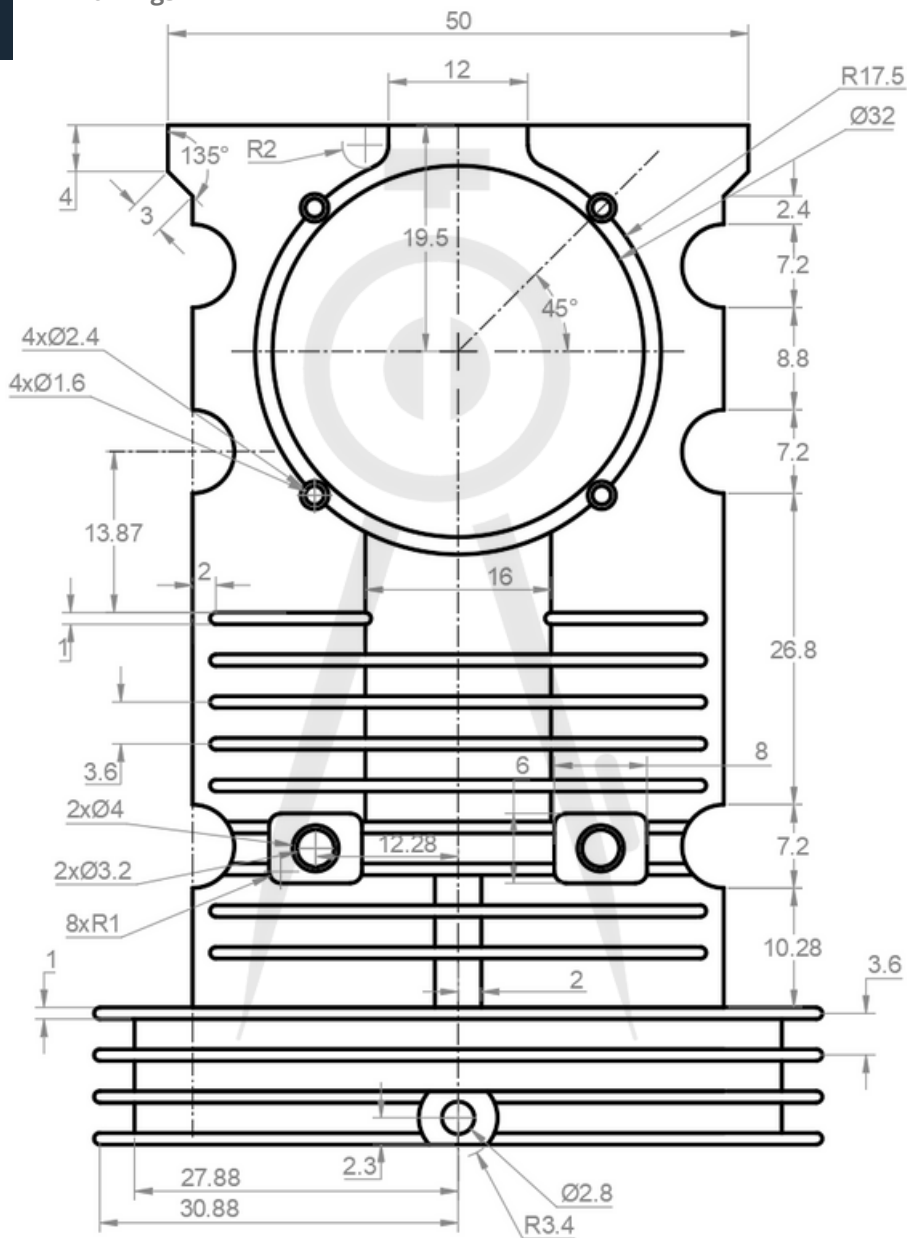
2D Drawings



2D Drawing -31

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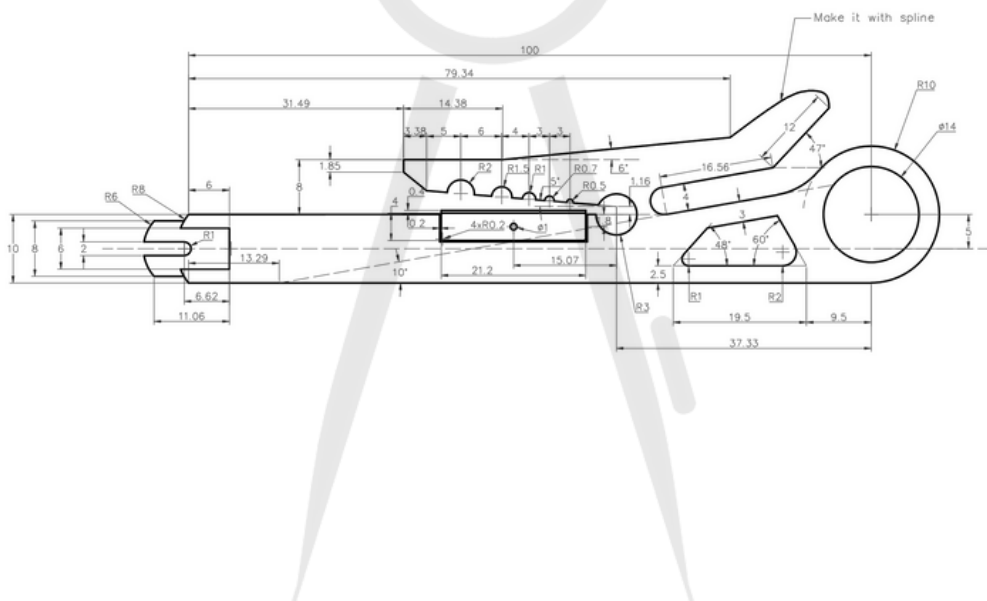
2D Drawings



2D Drawing -32

Learn to make this drawing

2D Drawings



2D Drawing -33

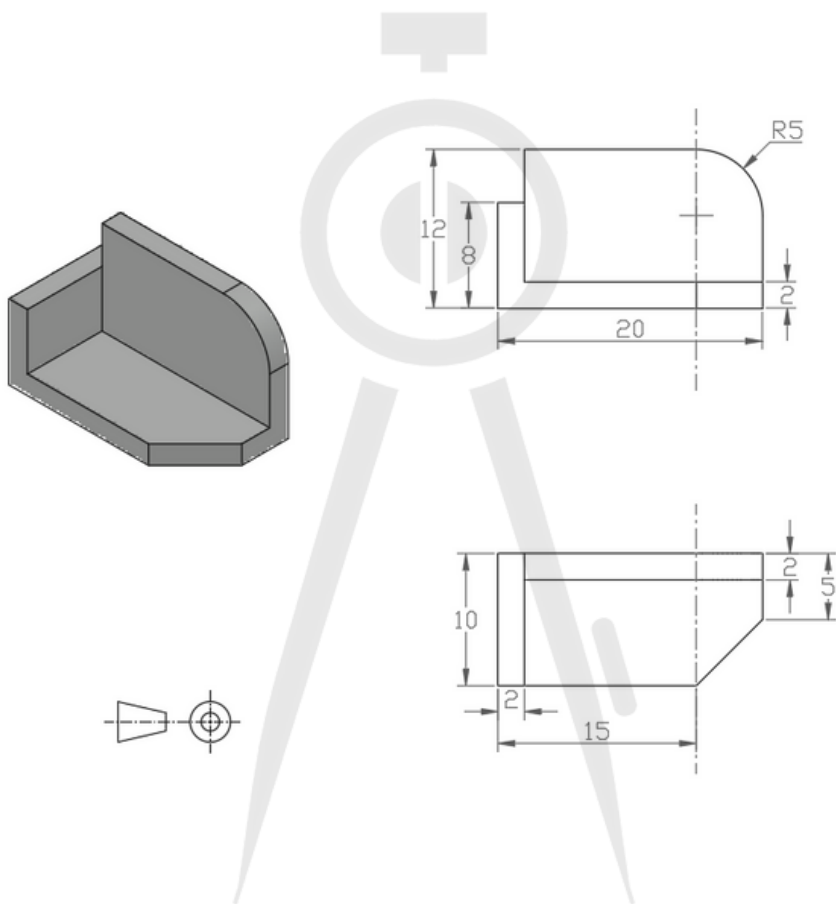
Learn to make this drawing

02

3D PRACTICE DRAWINGS



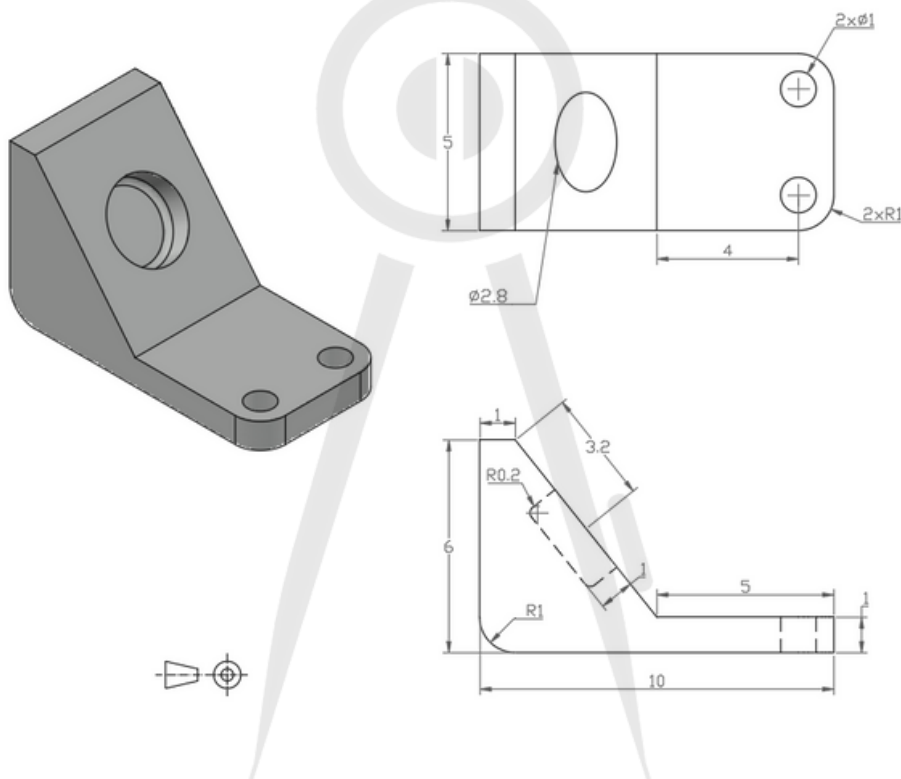
3D Drawings



3D Drawing -1

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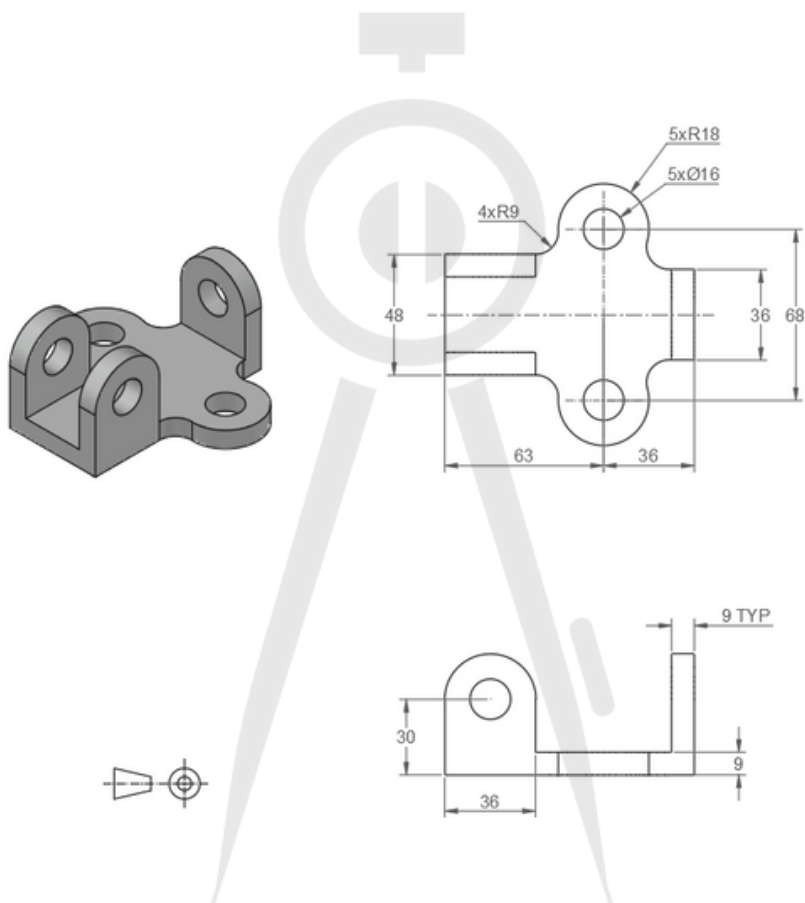
3D Drawings



3D Drawing -2

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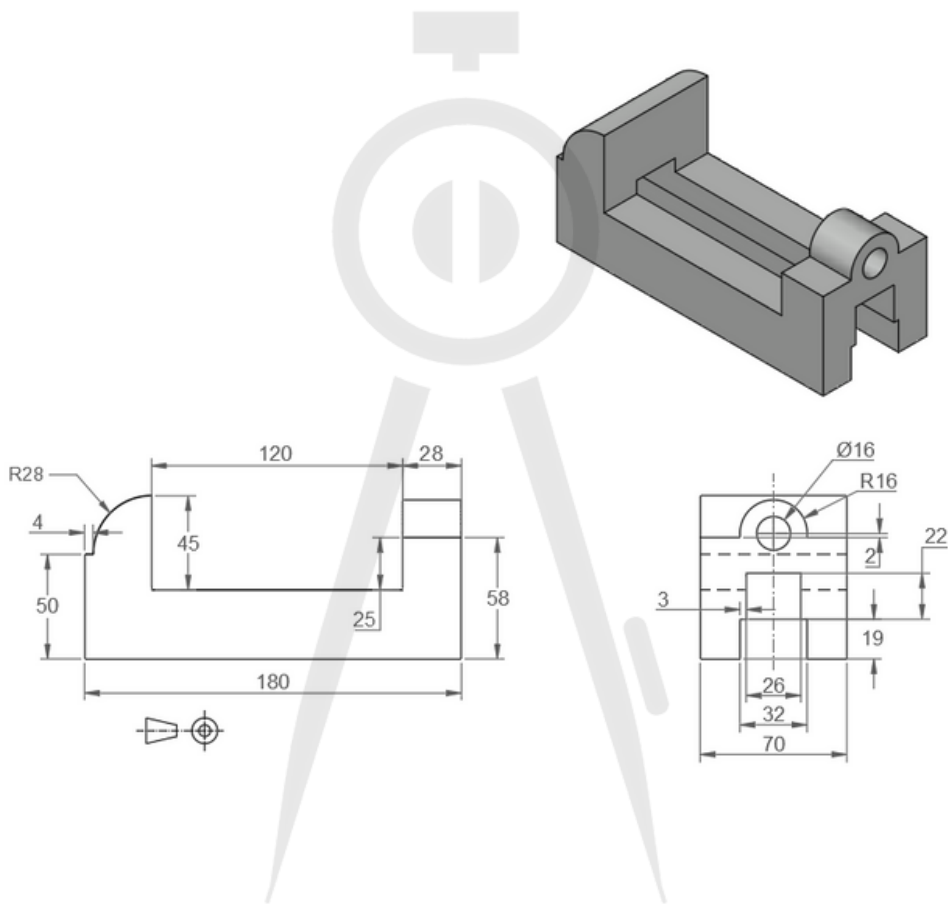
3D Drawings



3D Drawing -3

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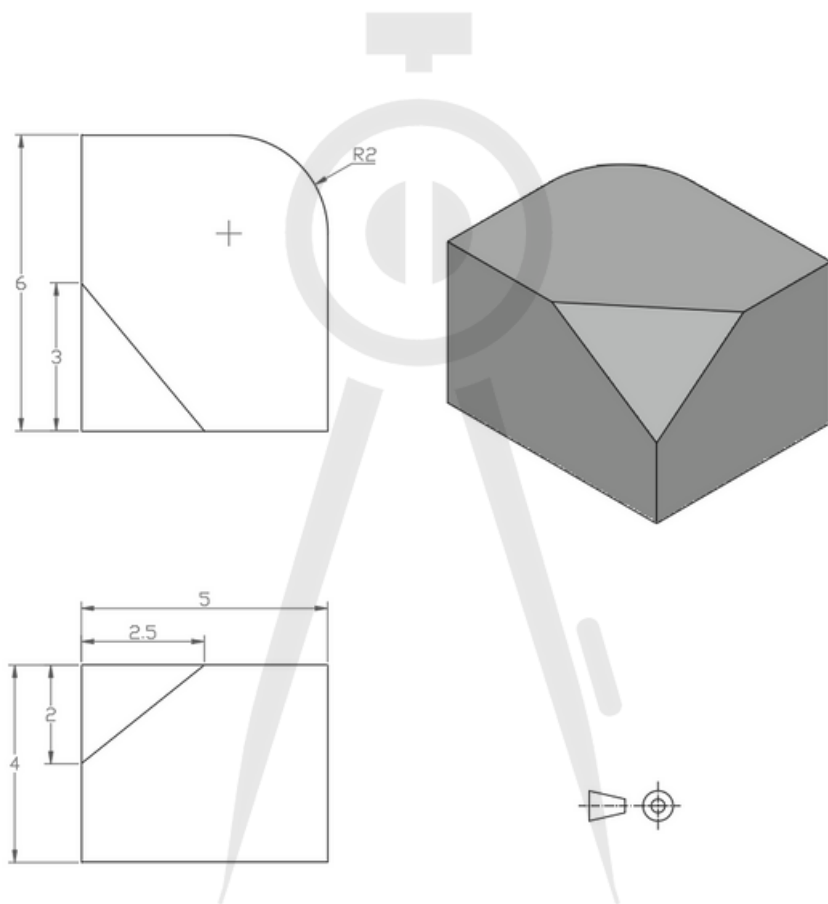
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3D Drawing -4

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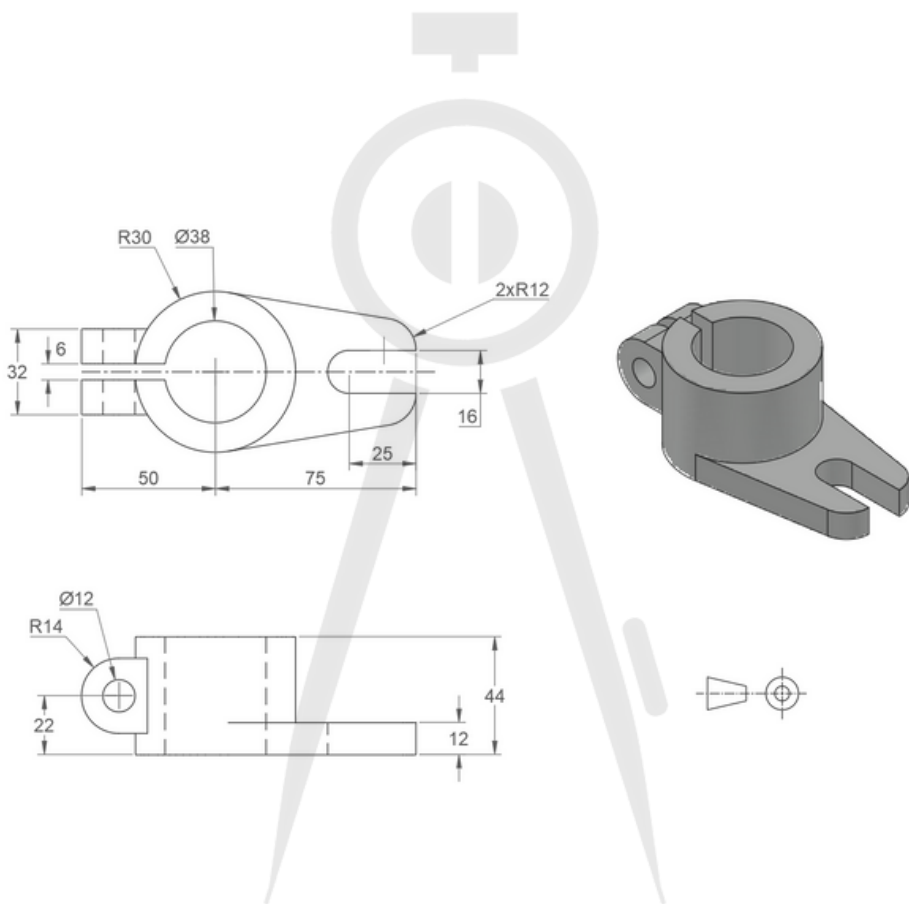
3D Drawings



3D Drawing -5

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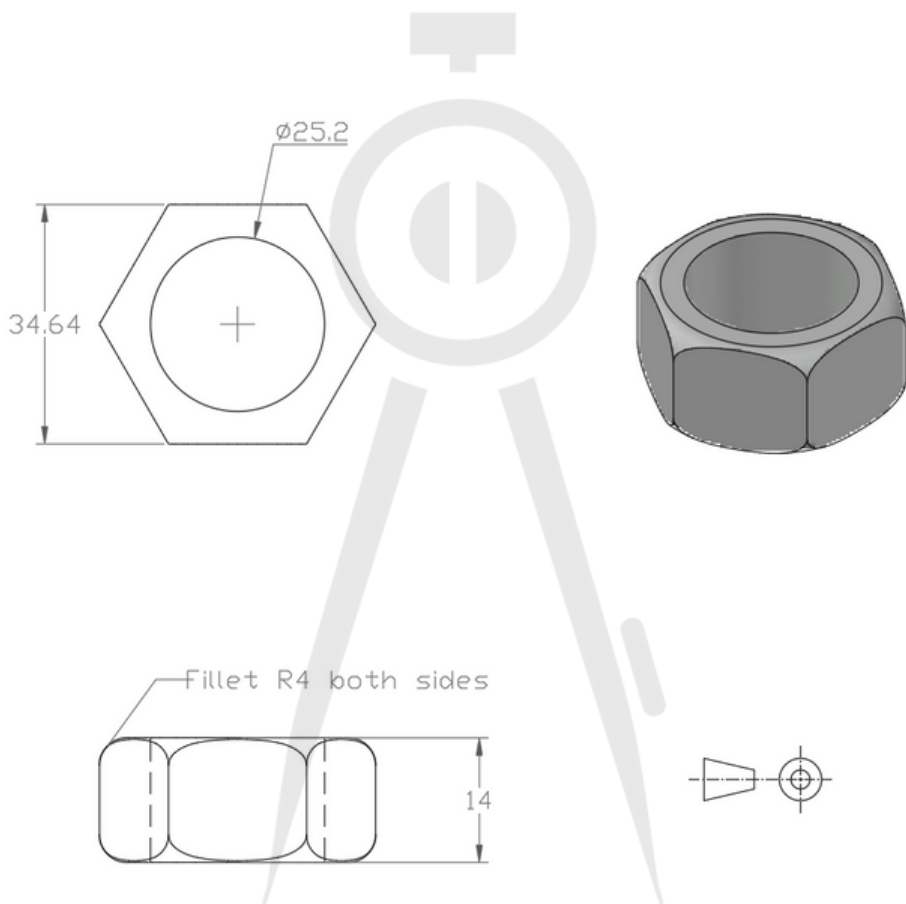
3D Drawings



3D Drawing -6

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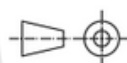
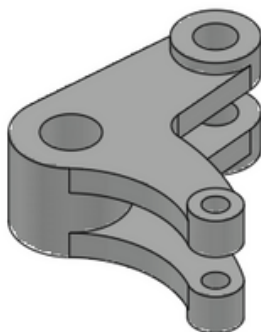
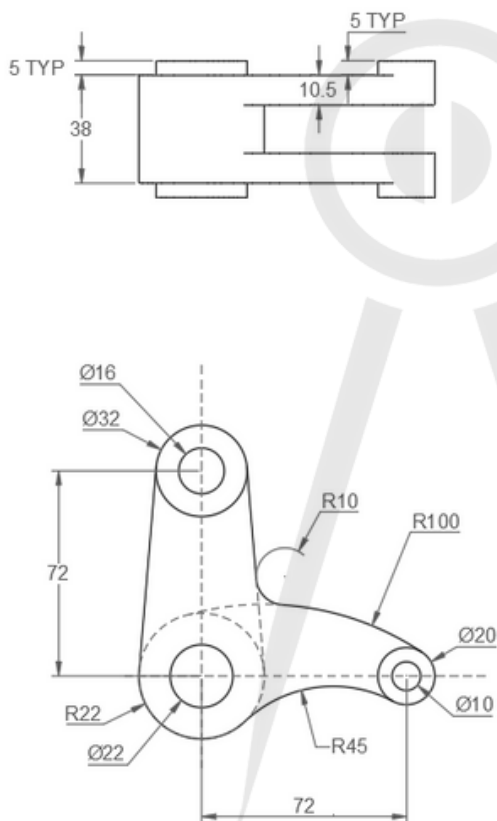
3D Drawings



3D Drawing -7

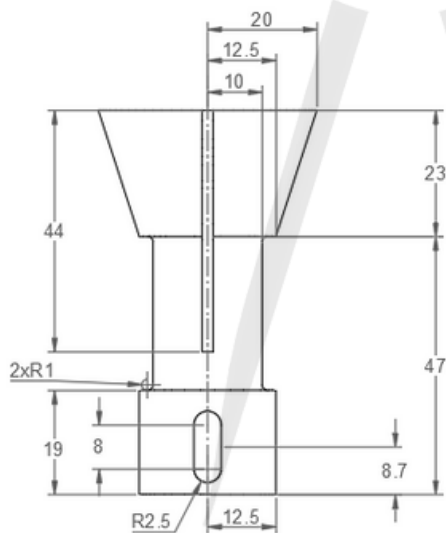
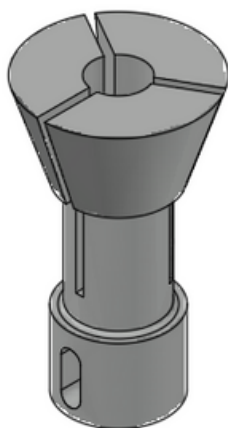
Learn to make this drawing

3D Drawings



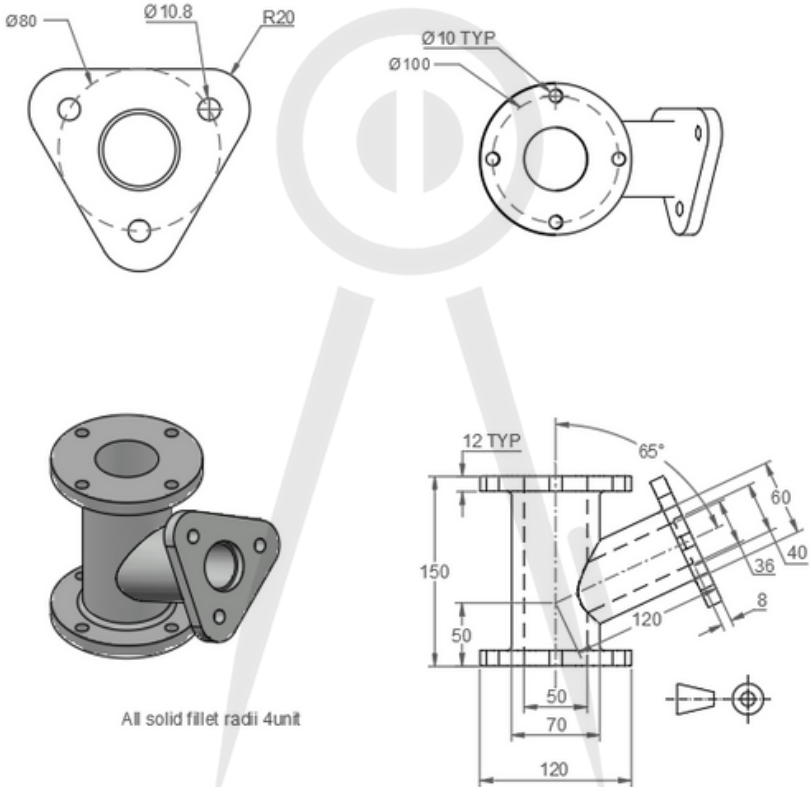
3D Drawing -8

Learn to make this drawing



Learn to make this drawing

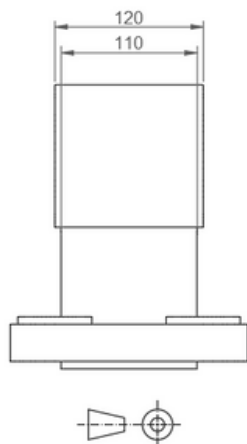
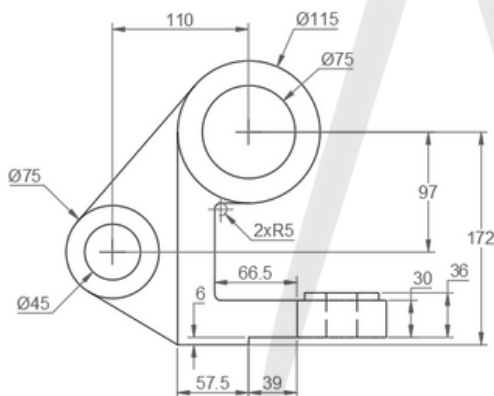
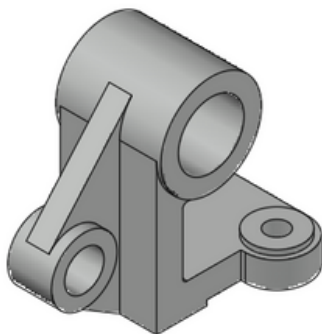
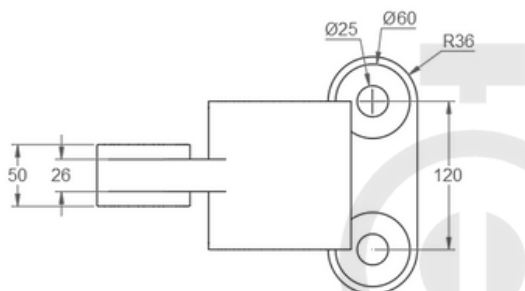
3D Drawings



3D Drawing -10

Learn to make this drawing

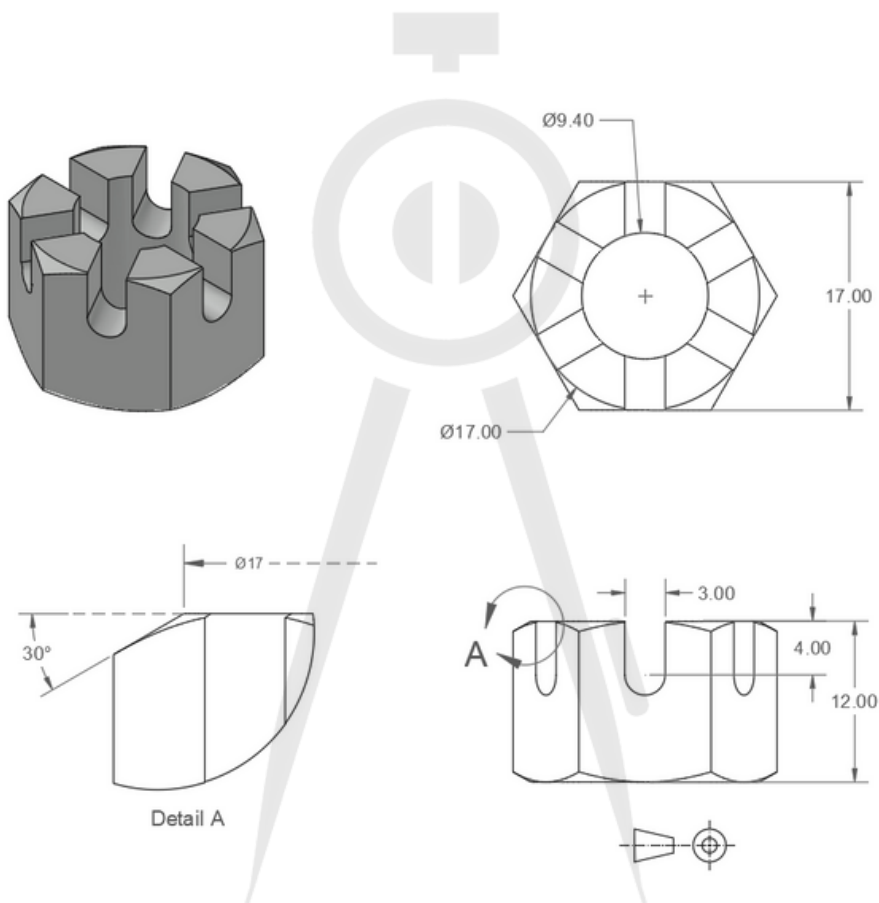
3D Drawings



3D Drawing -11

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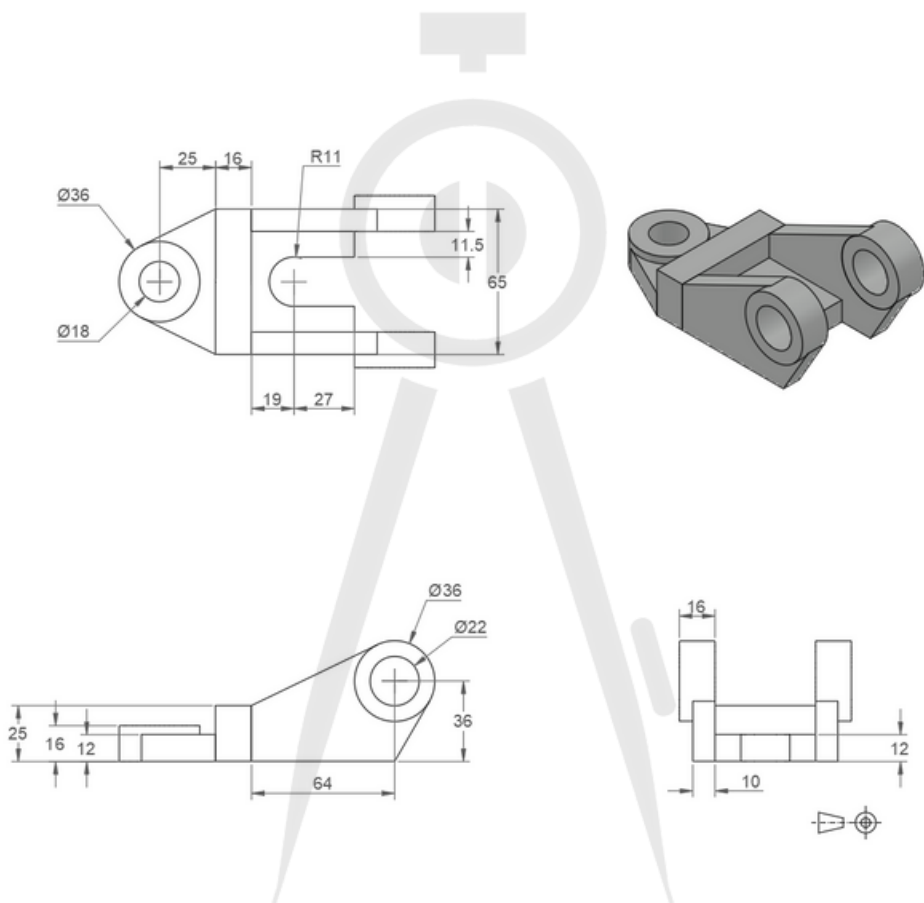
3D Drawings



3D Drawing -12

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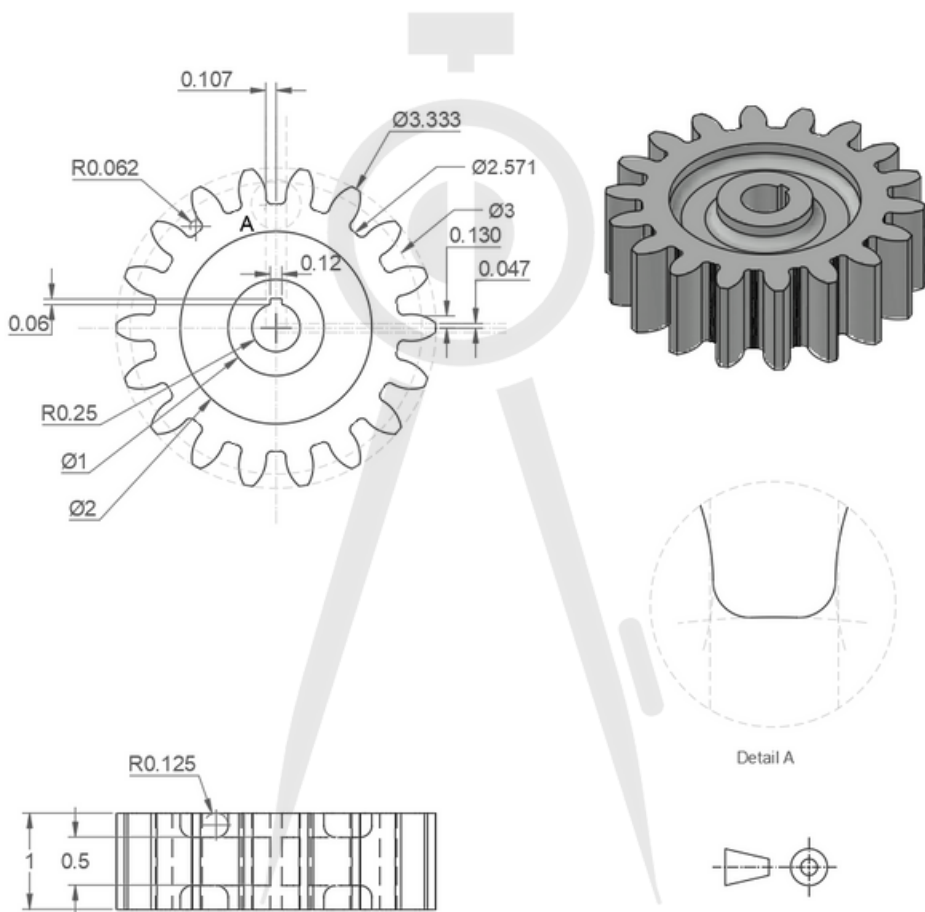
3D Drawings



3D Drawing -13

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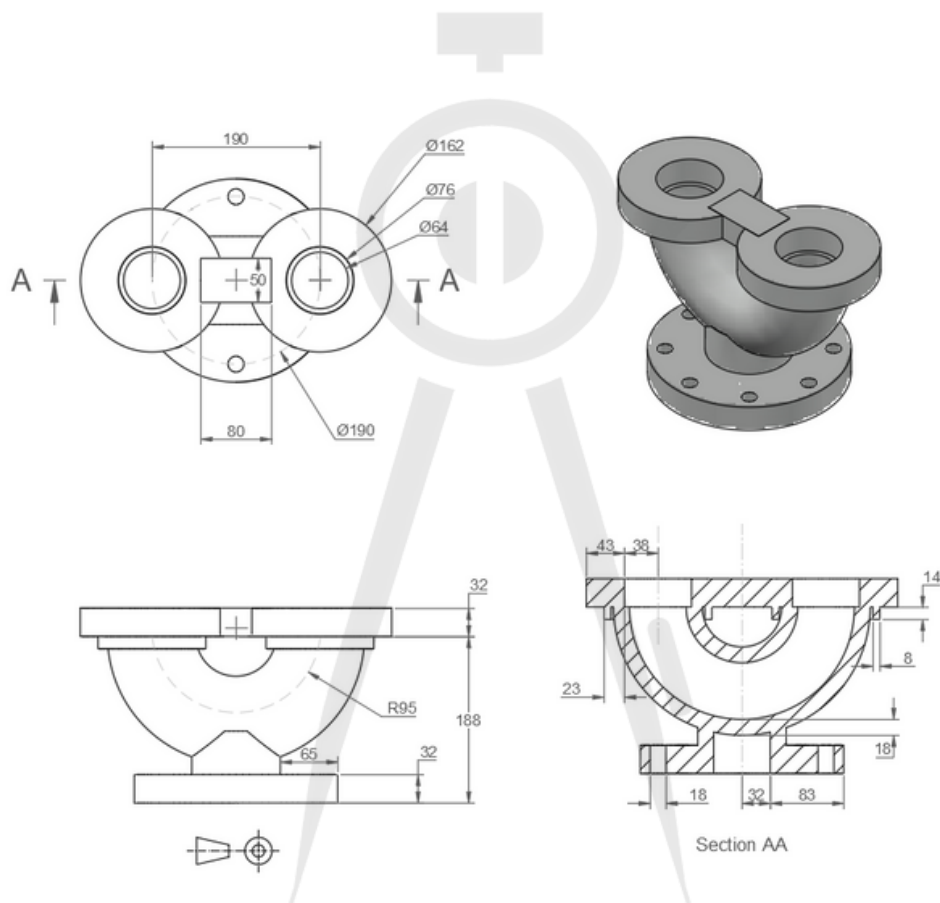
3D Drawings



3D Drawing -14

Learn to make this drawing

3D Drawings



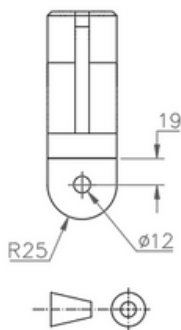
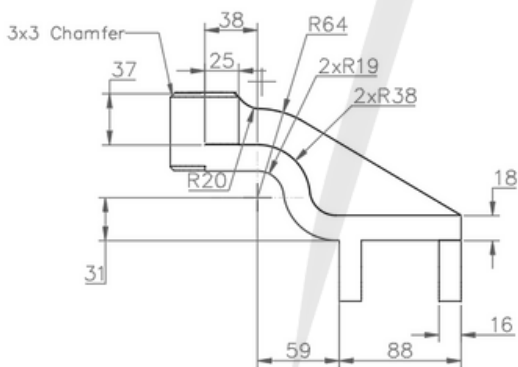
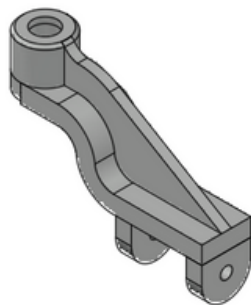
3D Drawing -15

Learn to make this drawing

fillets have 0.2 unit radii

Learn to make this drawing

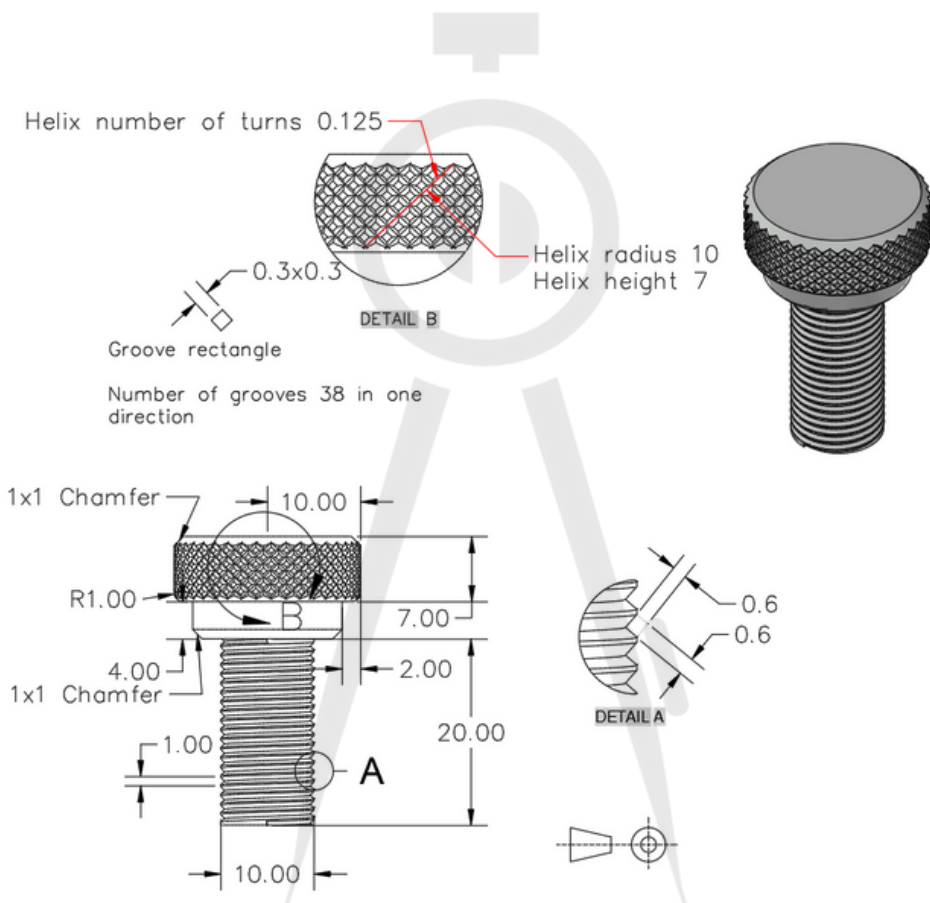
3D Drawings



3D Drawing -17

Learn to make this drawing

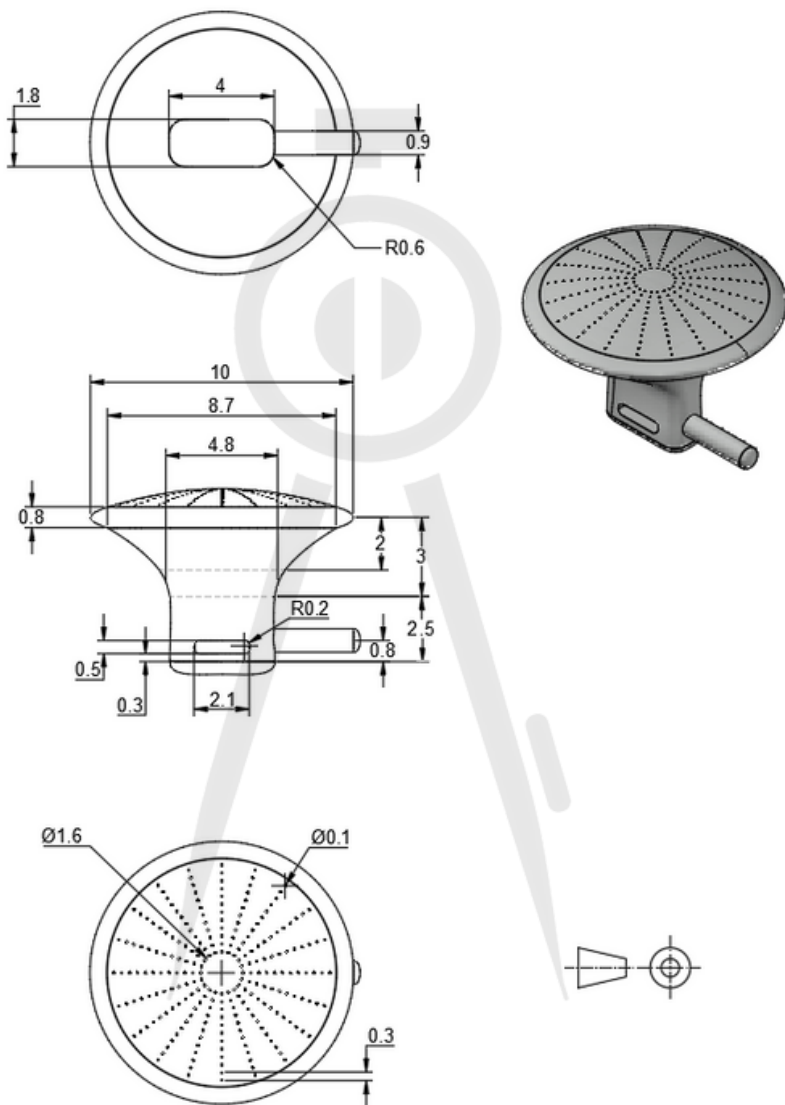
3D Drawings



3D Drawing -18

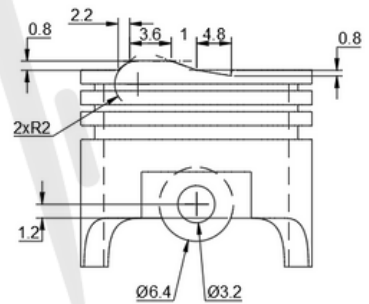
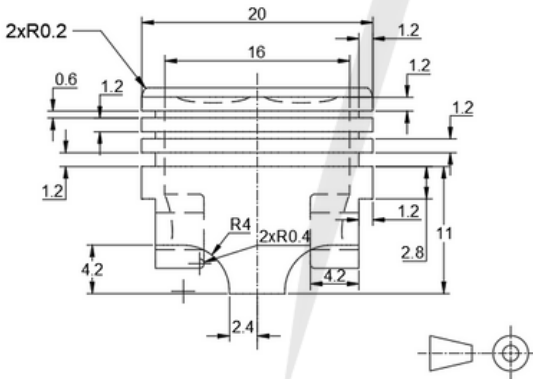
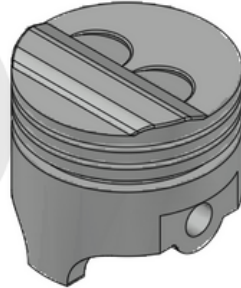
Learn to make this drawing

3D Drawings



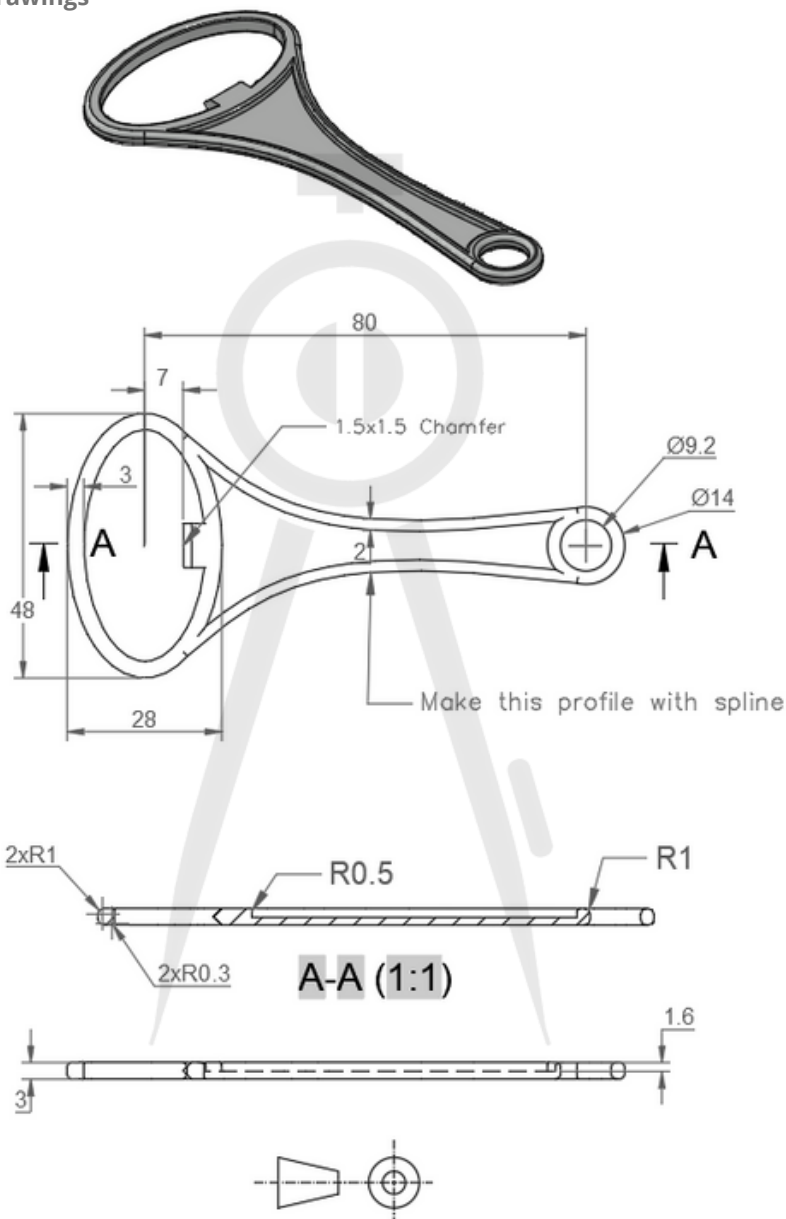
3D Drawing -19

Learn to make this drawing



Learn to make this drawing

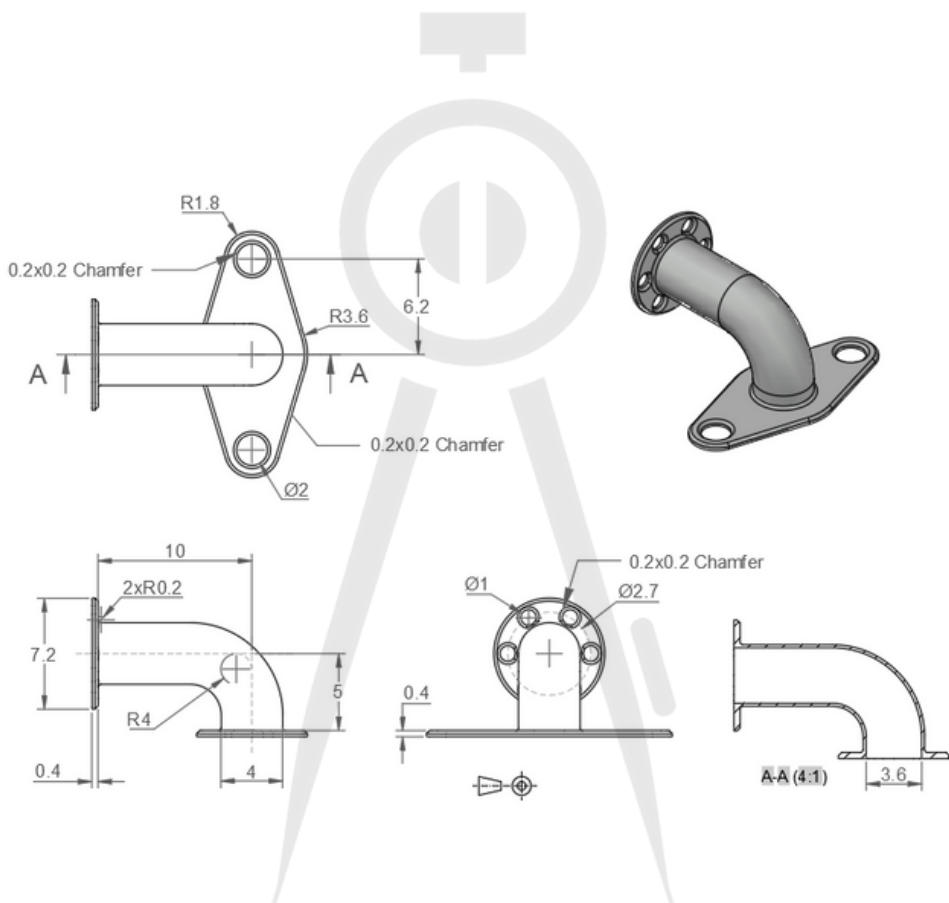
3D Drawings



3D Drawing -21

Learn to make this drawing

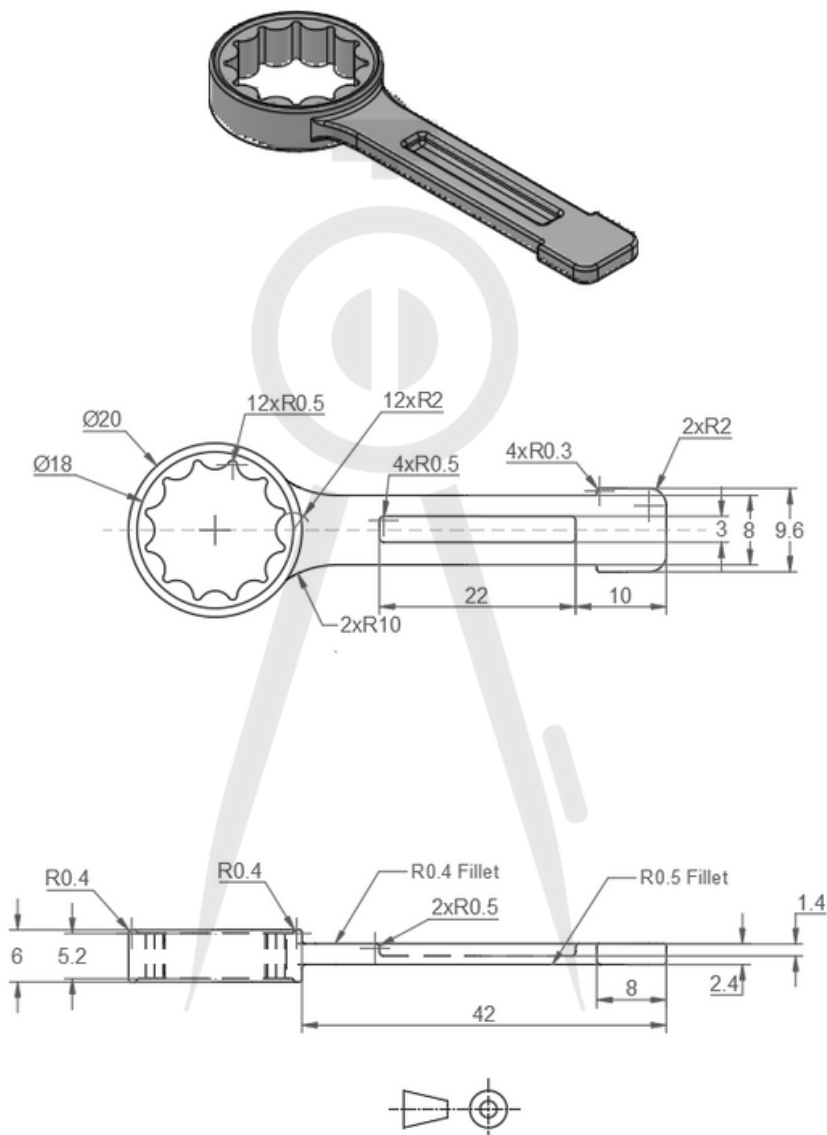
3D Drawings



3D Drawing -22

Learn to make this drawing

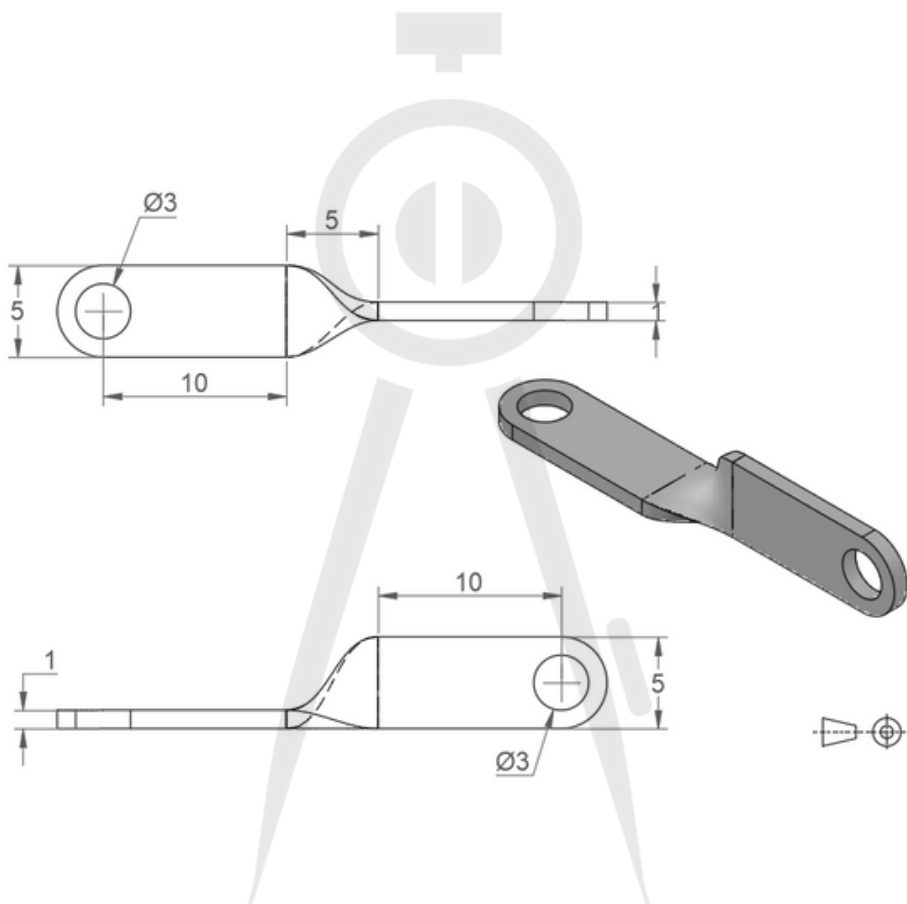
3D Drawings



3D Drawing -23

Learn to make this drawing

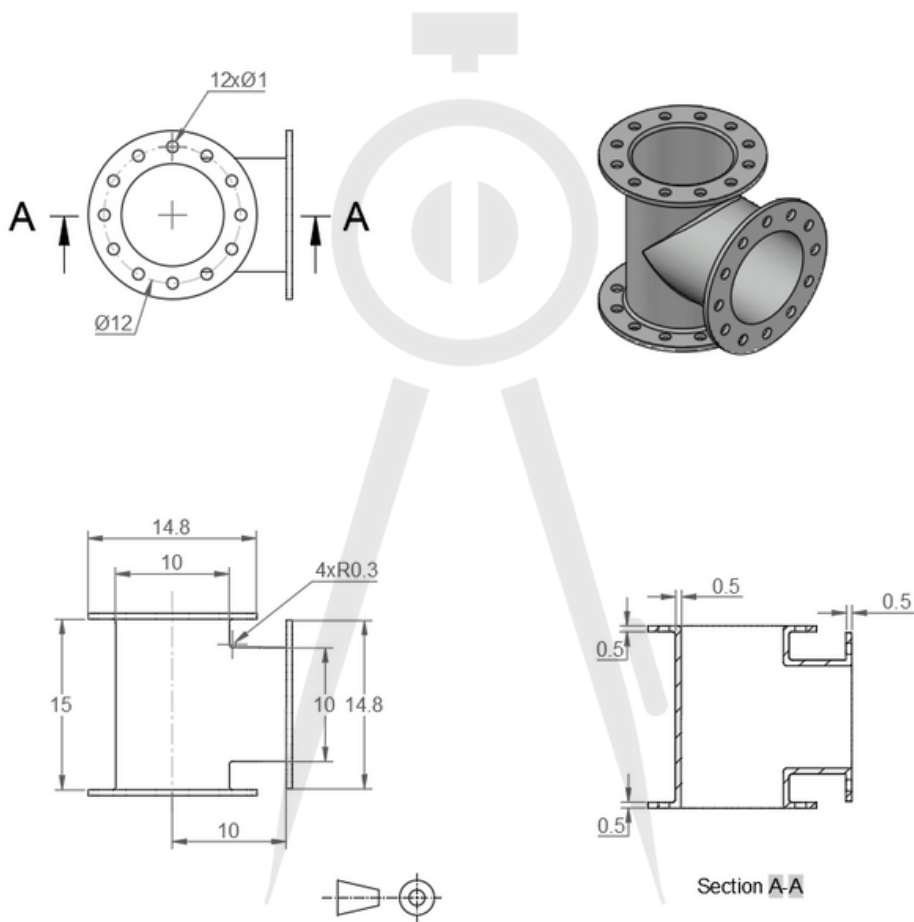
3D Drawings



3D Drawing -24

Learn to make this drawing

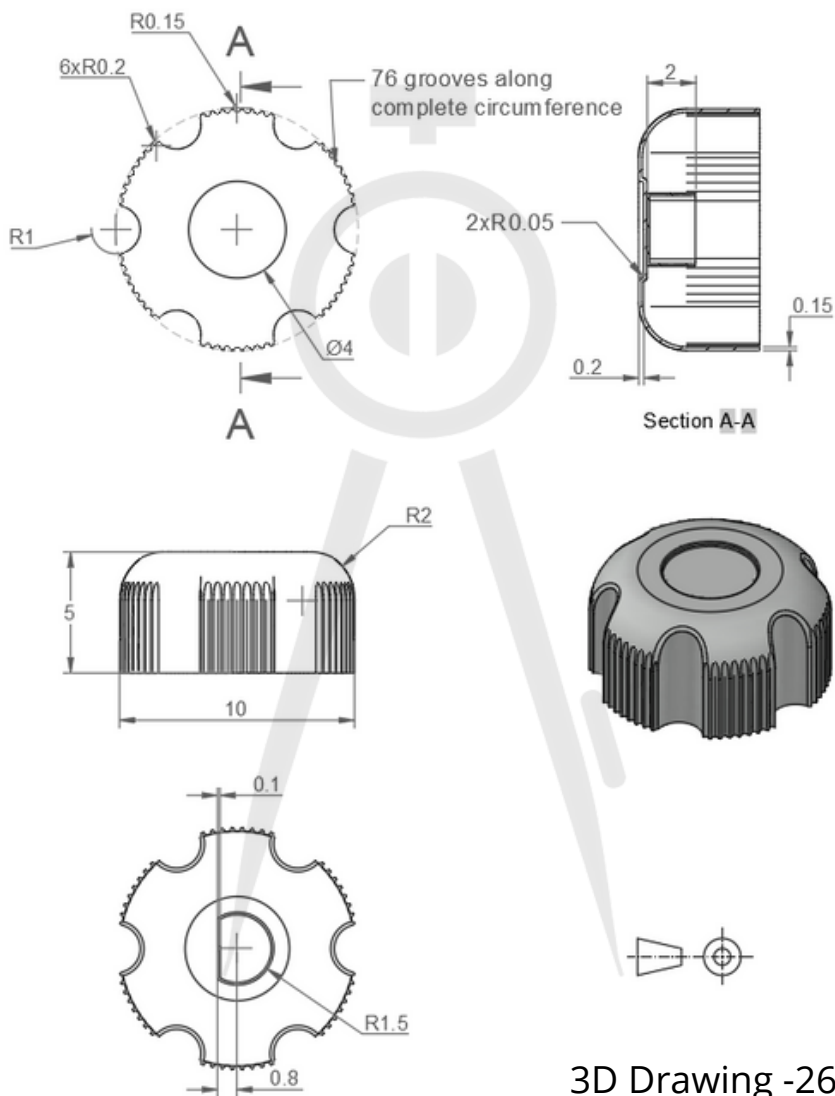
3D Drawings



3D Drawing -25

Learn to make this drawing

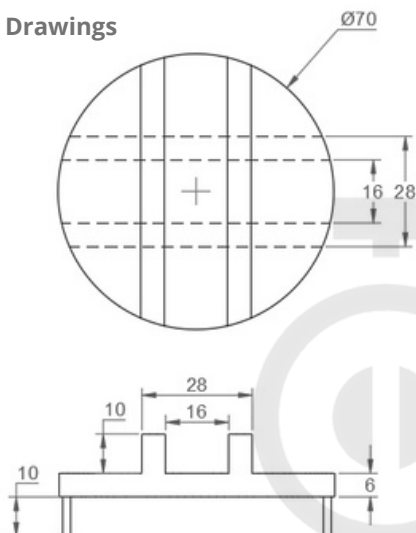
3D Drawings



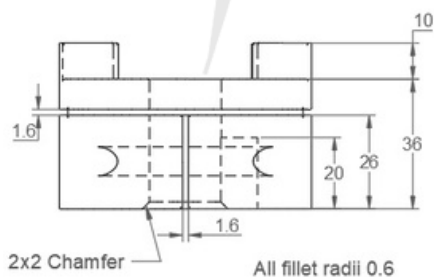
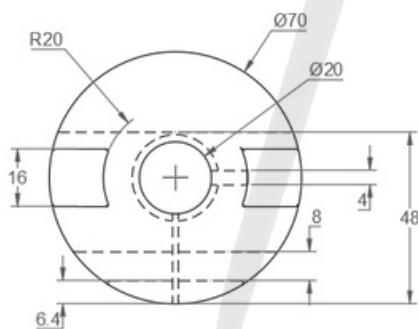
3D Drawing -26

Learn to make this drawing

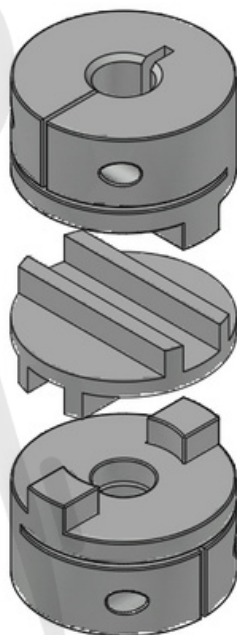
3D Drawings



Intermediate flange of Oldham coupling



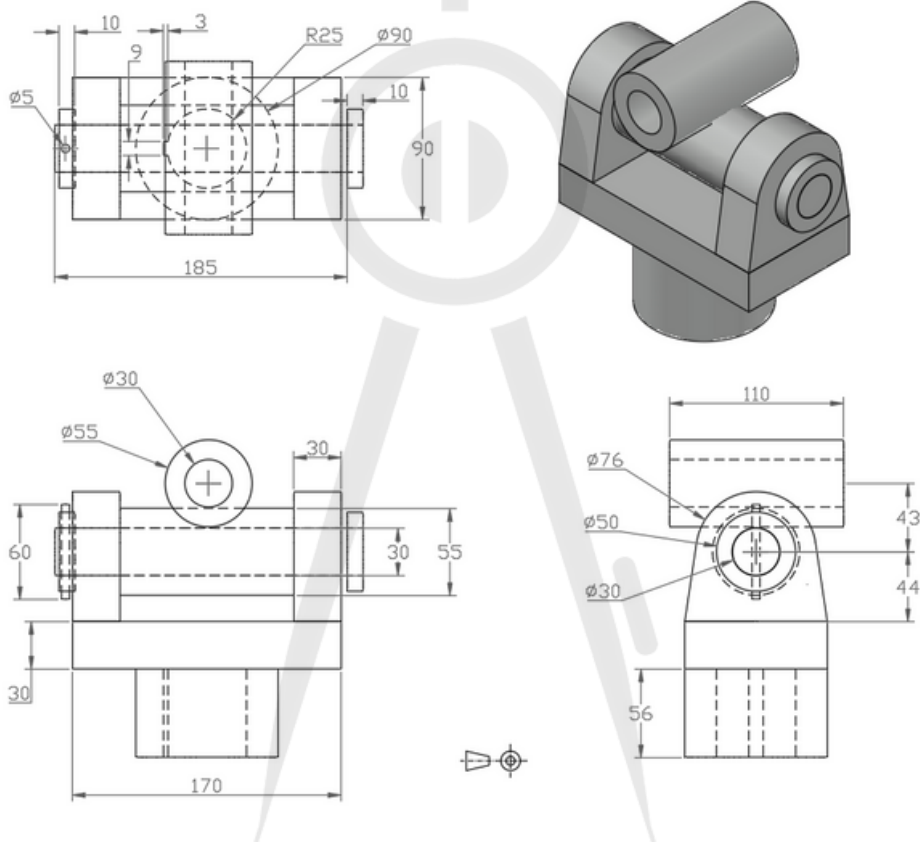
Driving and driven flange of Oldham coupling



3D Drawing -27

Learn to make this drawing

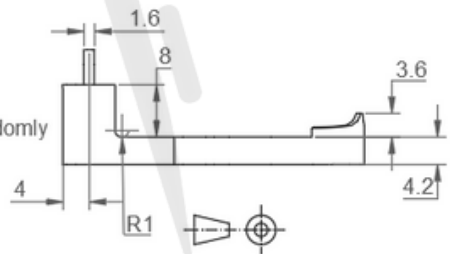
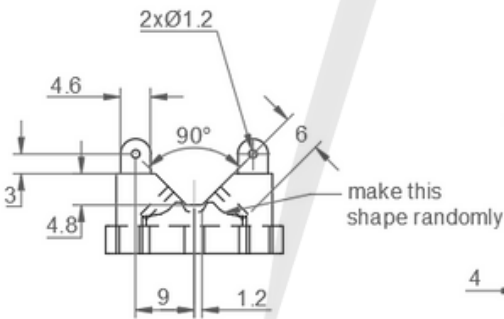
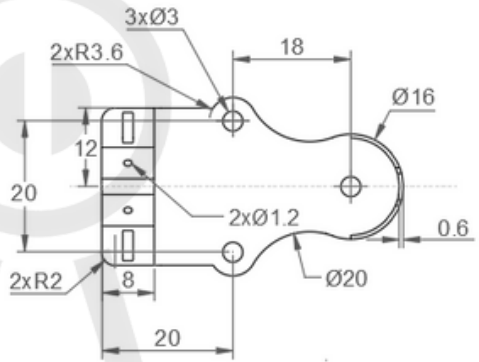
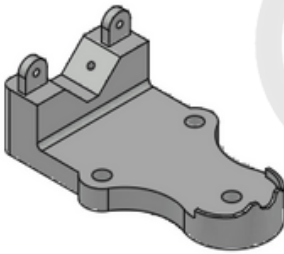
3D Drawings



3D Drawing -28

Learn to make this drawing

3D Drawings



3D Drawing -29

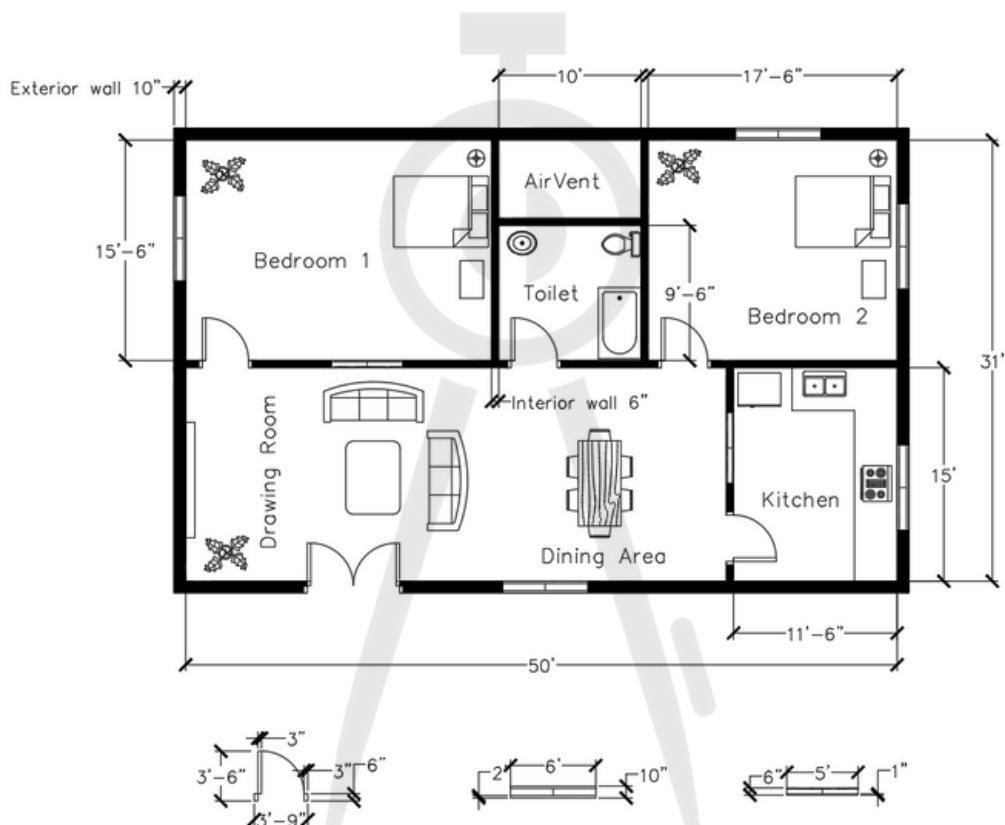
Learn to make this drawing

03

HOUSE PLAN PROJECT



House Plan project



House Plan project -1

Learn to make this drawing

House Plan project -2

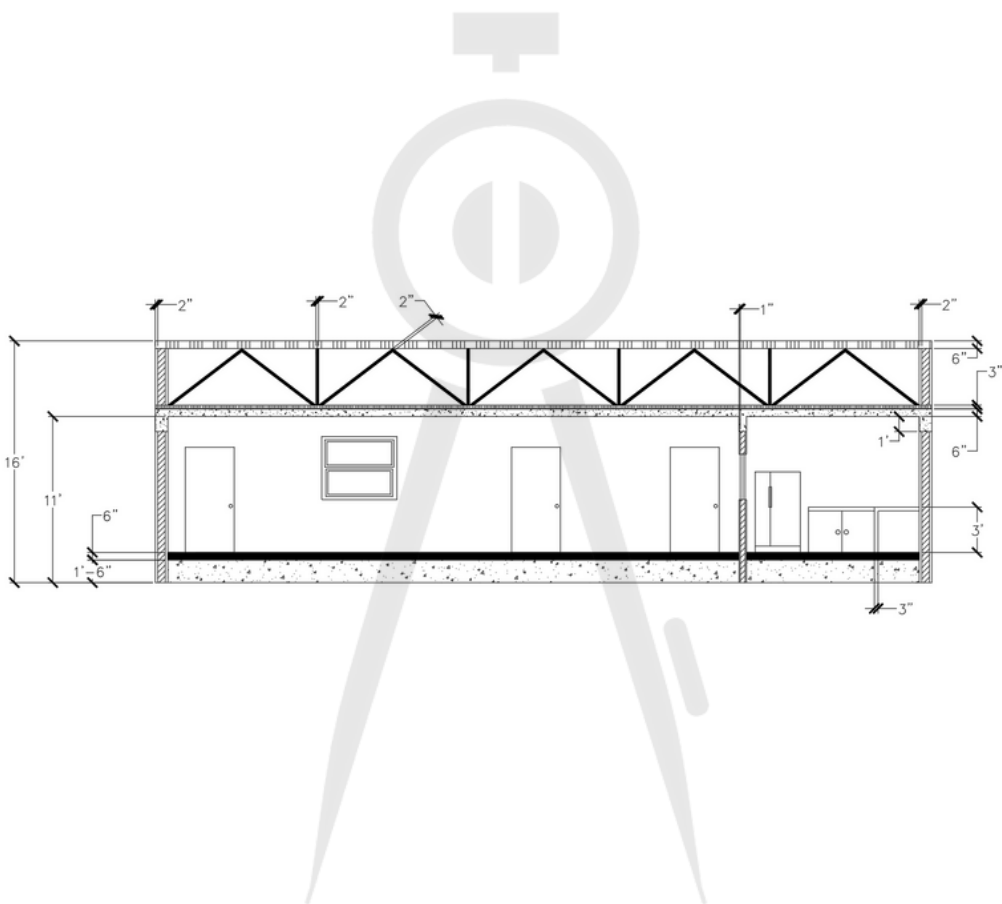
71

Architectural elevation drawing of a building. The drawing includes the following dimensions:

- Roof pitch: 2" vertical, 1" horizontal.
- Roof width: 5'-6" and 8'.
- Chimney: 4'-8" wide, 3'-10" high, 3'-3" wide, 4" thick, 6' high, 4' wide base.
- Building height: 11'.
- Foundation: 6" thick.
- Porches: 2' high, 6" wide.
- Stairs: 1' wide, 6" high.
- Windows: 5'-1'-5" wide, 1' high.
- Door: 5'-1'-5" wide, 1' high.

Learn to make this drawing

House Plan project



House Plan project -4

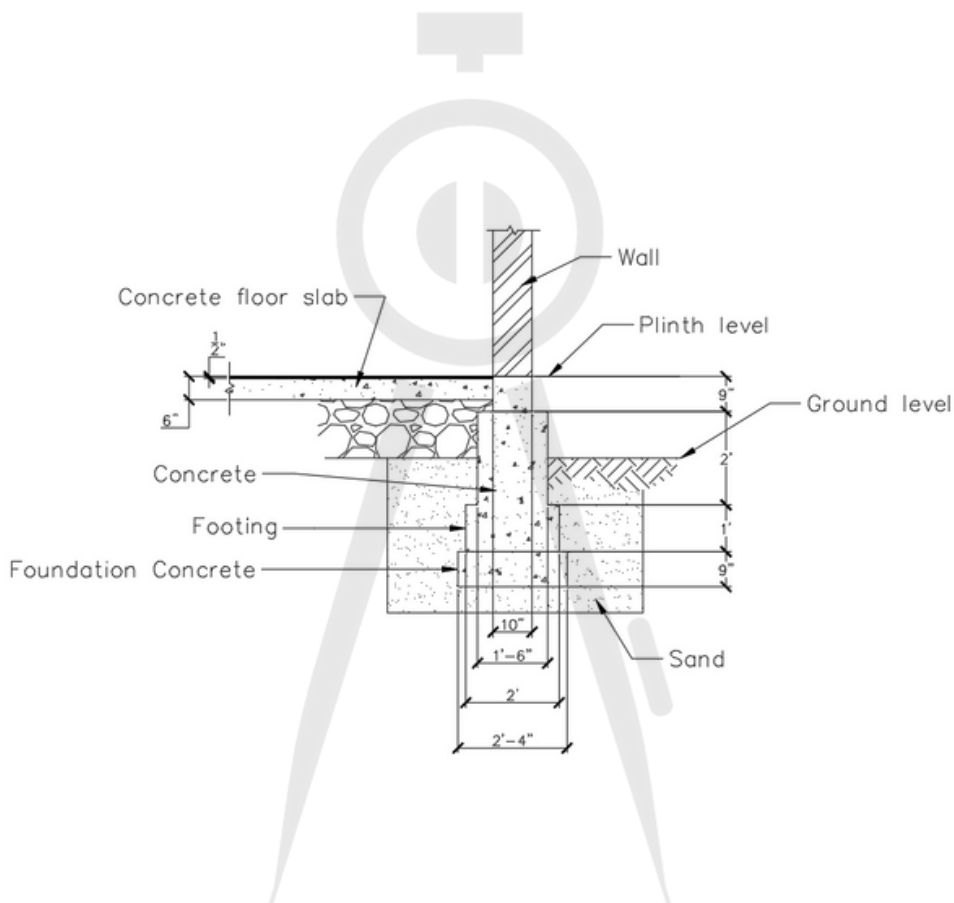
Learn to make this drawing

The image contains two architectural drawings of a staircase:

- Elevation View (Top):** Shows the side profile of the staircase. Key features and dimensions include:
 - Floor Slab:** 6" thick at the top.
 - Window:** Located on the left wall, 3'-4" high.
 - Staircase:** Total height of 20'. The flight has a vertical rise of 11'-6" and a horizontal run of 11'-6". The treads are 11" wide, and the risers are 6" high.
 - Waist Slab:** 4'-6" wide at the bottom.
 - Railings:** Indicated on the staircase.
 - Floor Beam:** 6" thick at the top right.
 - Doors:** Located at the bottom right, 10' high.
 - Other dimensions:** 4'-4" for the lower wall section, 1'-6" for the lower wall section, 7' for the lower wall section, 9" for the base of the railing, and 2" for the door frame.
- Plan View (Bottom):** Shows the top-down view of the staircase. Key features and dimensions include:
 - Wall:** 6" thick at the top.
 - Staircase:** 3'-2" wide.
 - Dimensions:** 4'-6" for the width of the staircase, 7' for the depth of the staircase, 4" for the width of the staircase, 8" for the width of the staircase, 3'-4" for the width of the staircase, and 3' for the width of the staircase.

Learn to make this drawing

House Plan project



House Plan project -6

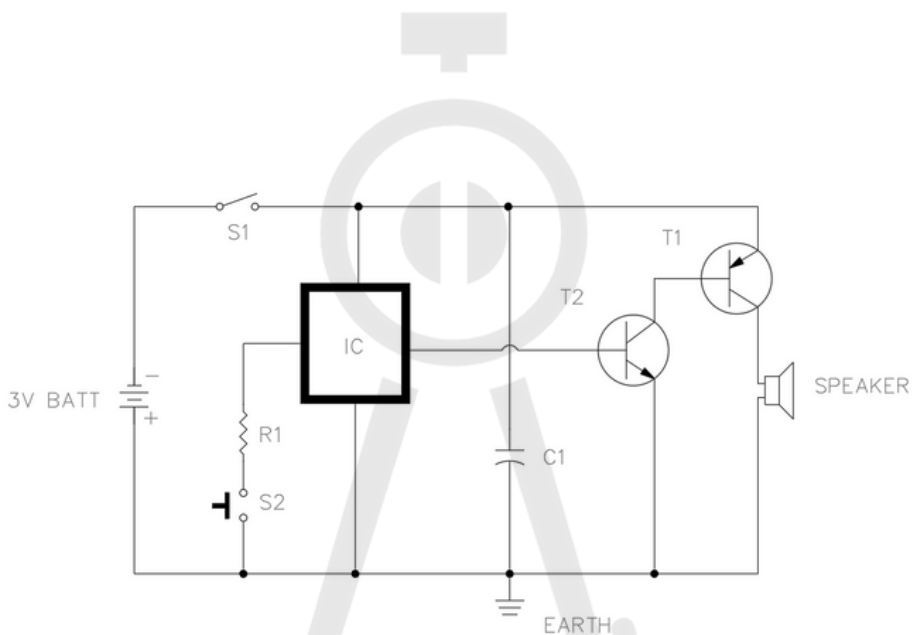
Learn to make this drawing

04

DIMENSIONLESS DRAWINGS



Dimensionless drawings

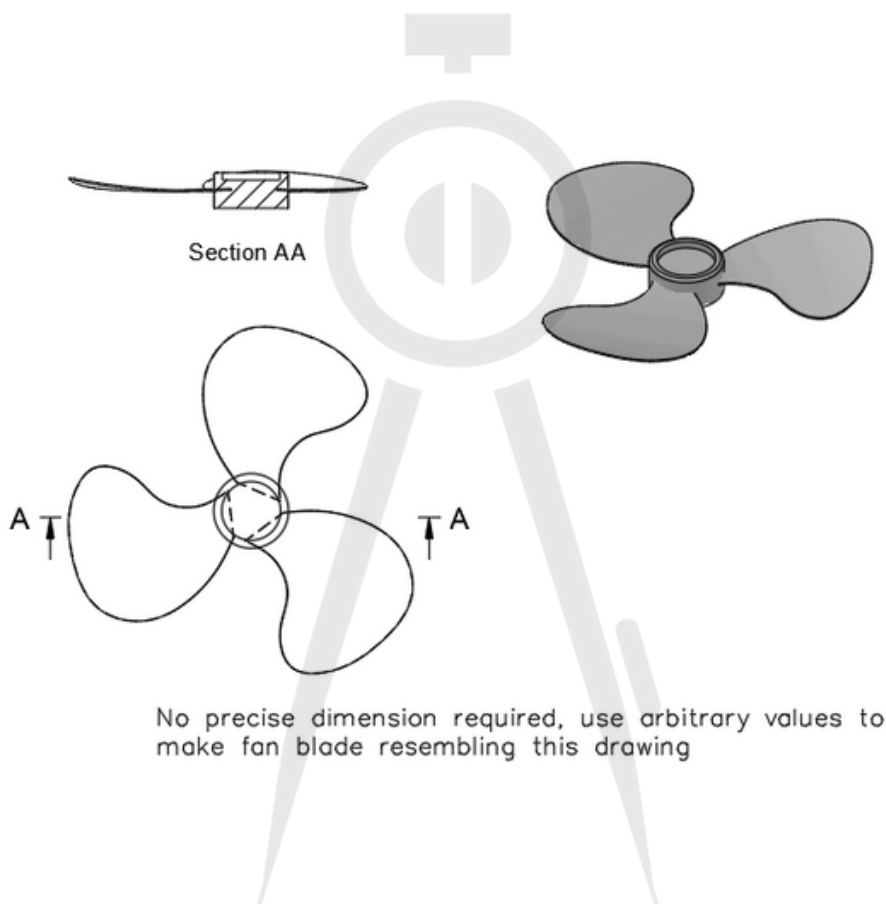


Use mostly ready made blocks for the drawing
No dimension required for the drawing

Dimensionless drawings -1

Learn to make this drawing

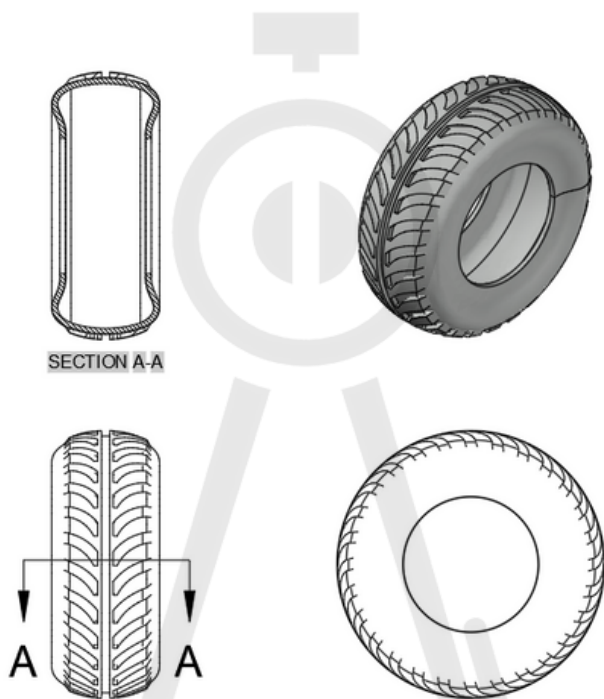
Dimensionless drawings



Dimensionless drawings -2

Learn to make this drawing

Dimensionless drawings



No precise dimension required, use arbitrary values to make tire resembling this drawing

Dimensionless drawings -3

Learn to make this drawing

05

FUSION 360 DRAWINGS



Technical drawing of a mechanical part, showing three views: front view, top view, and side view. The part is a bracket with a horizontal base and a vertical arm.

Front View Dimensions:

- Base width: 48.0
- Base thickness: 2.0
- Vertical arm height: 60.0
- Top flange width: 24.0
- Top flange thickness: 2.0
- Central hole diameter in vertical arm: $\varnothing 7.2$
- Base central hole diameter: $\varnothing 18.0$
- Top flange mounting holes: $2 \times \varnothing 10.0$
- Distance between top flange mounting holes: 24.0
- Distance from base to vertical arm: 42.0
- Distance from base to central hole: 16.0
- Distance from base to top flange: 15.0
- Top flange mounting holes: $2 \times R10.0$
- Vertical arm fillet: $R2.0$

Top View Dimensions:

- Base length: 30.0
- Distance from base to vertical arm: 42.0
- Distance from base to central hole: 16.0
- Distance from base to top flange: 15.0
- Top flange mounting holes: $2 \times R10.0$
- Vertical arm fillet: $R2.0$

Side View Dimensions:

- Thickness: 12.0

Notes:

- All round $R0.5$

3D Isometric View: A 3D isometric view of the part is shown to the right of the top view.

Learn to make this drawing

Fusion 360 Drawings

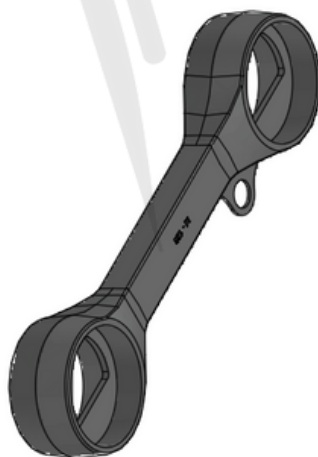
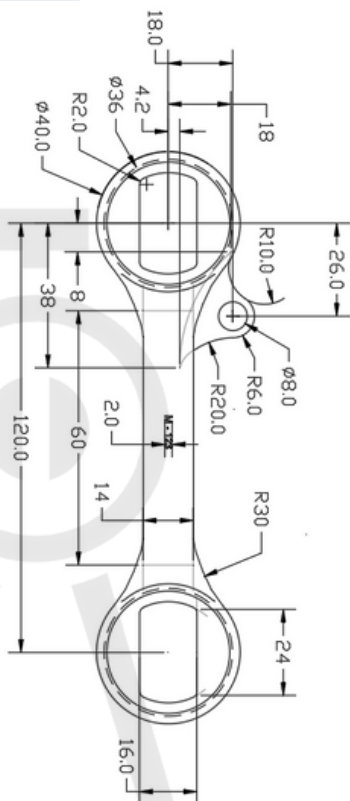
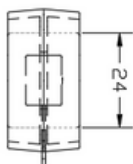
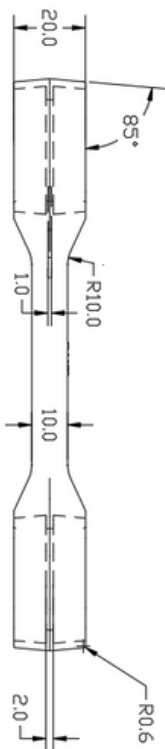


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Drawing 3

Learn to make this drawing

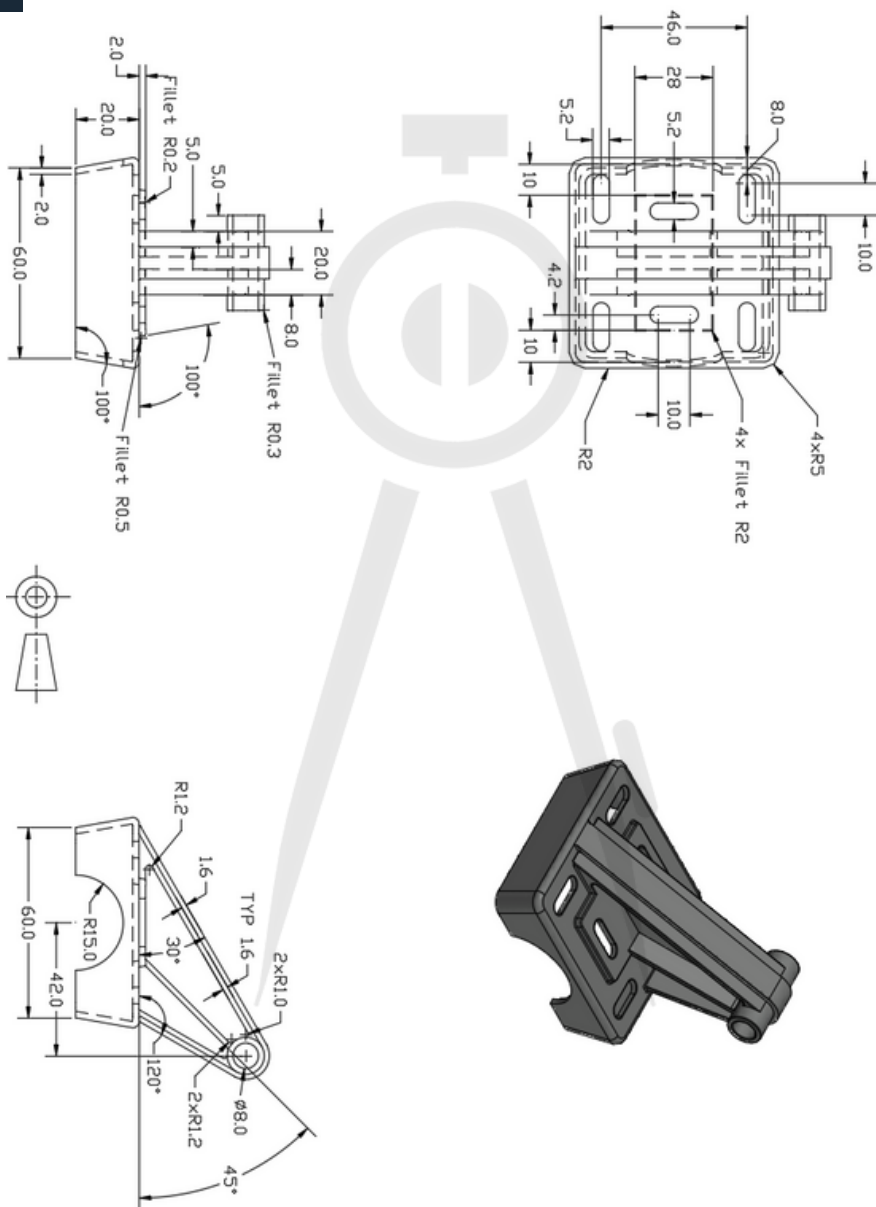
Fusion 360 Drawings



Drawing 4

Learn to make this drawing

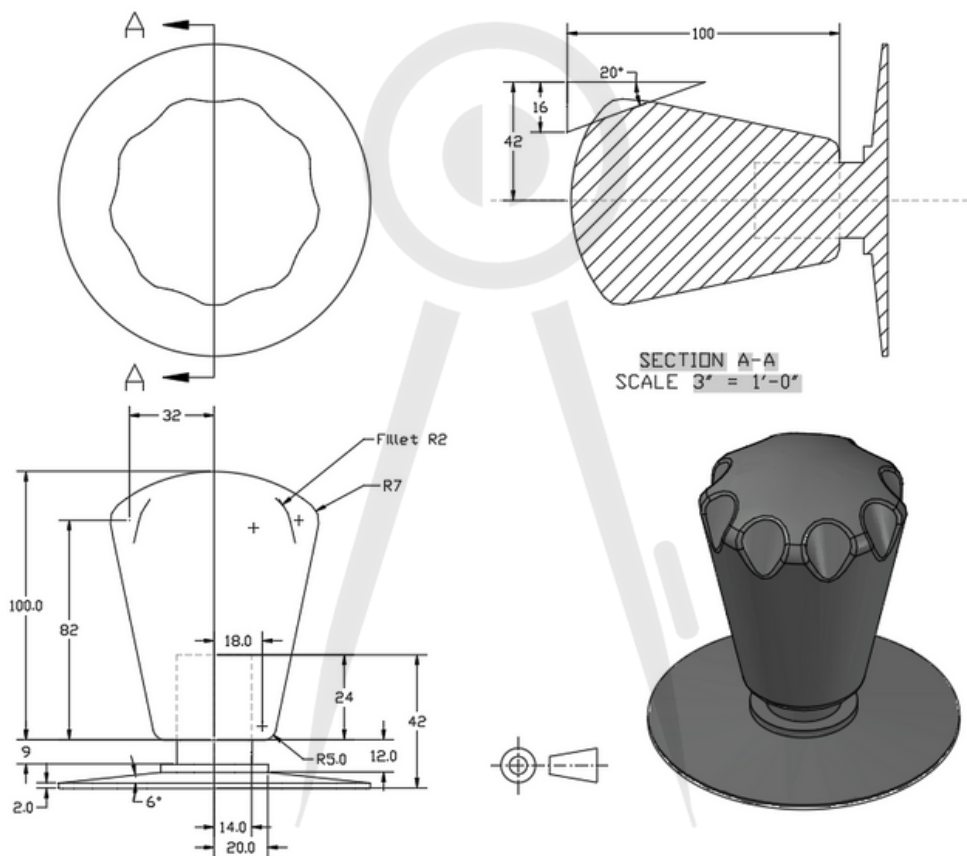
Fusion 360 Drawings



Drawing 5

Learn to make this drawing

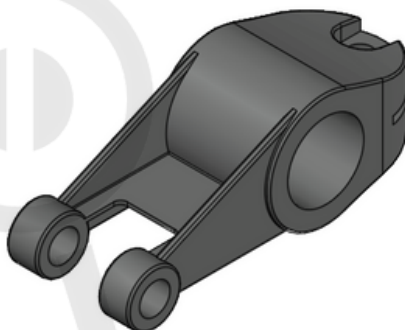
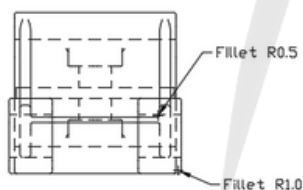
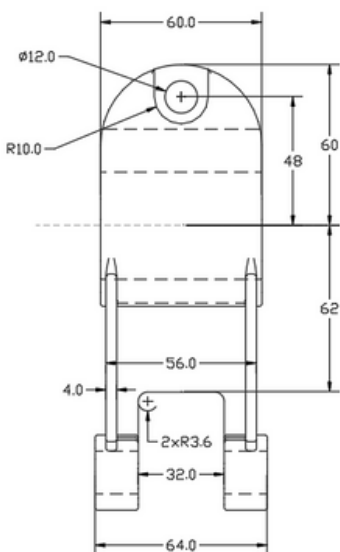
Fusion 360 Drawings



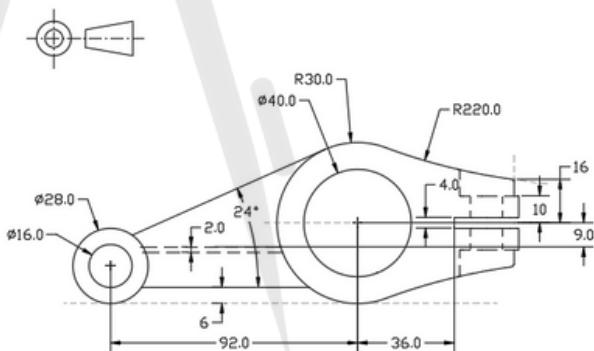
Drawing 6

Learn to make this drawing

Fusion 360 Drawings



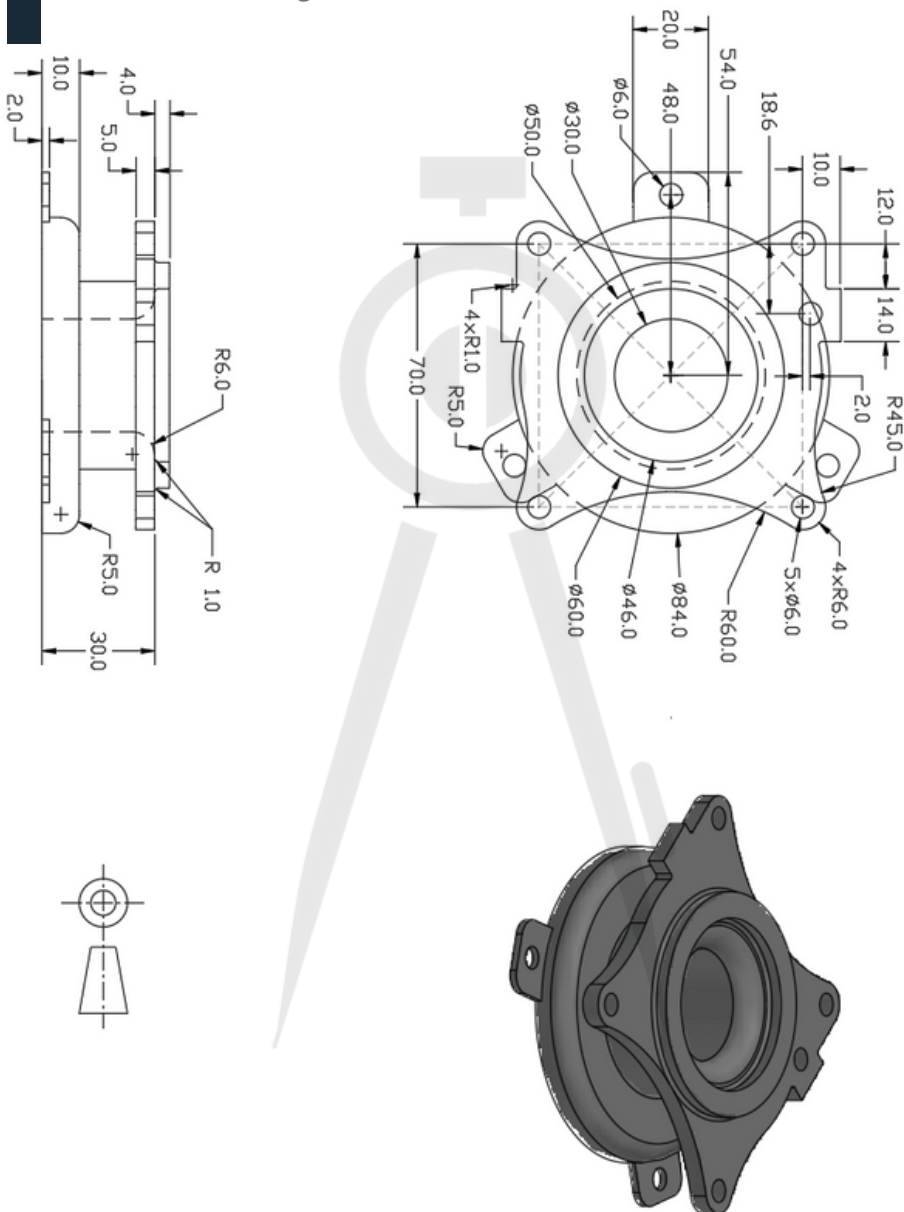
Fillet 1 mm if not specified



Drawing 7

Learn to make this drawing

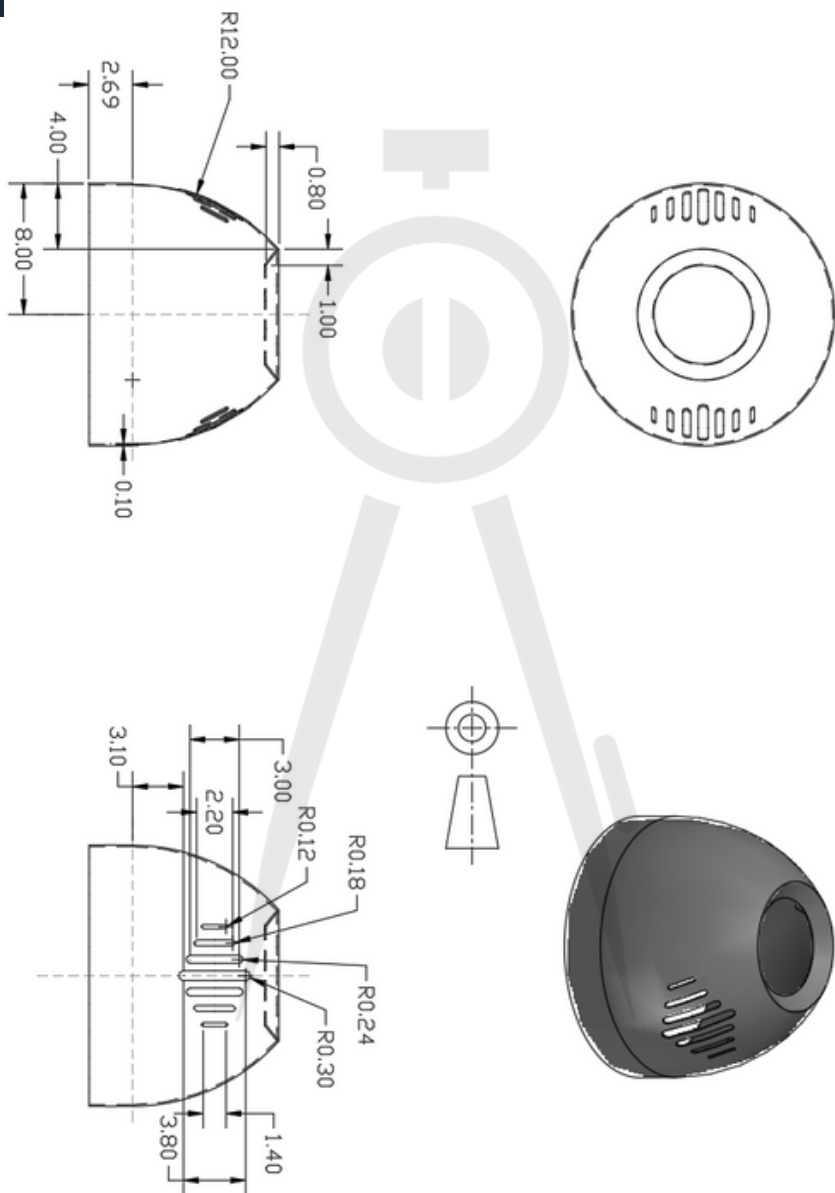
Fusion 360 Drawings



Drawing 8

Learn to make this drawing

Fusion 360 Drawings



Drawing 9

Learn to make this drawing

Fusion 360 Drawings



Use screenshot of this bottle to make its 3D drawing

Drawing 10

Learn to make this drawing

Jaiprakash Pandey
Author



About this Book

A lot of effort went into creating this book and the drawings featured here are a collection of practice exercises that I have created over a period of 6 years.

The drawings in this book are created by Jaiprakash Pandey and compiled by Kalpana pandey.

Though this edition is revised meticulously still not immune to errors and if you find any please reach out to me at **admin@thesourcecad.com**